A NEW VISION FOR THE LINCOLN FIELDS COMMUNITY

QUEEN'S UNIVERSITY SCHOOL OF URBAN AND REGIONAL PLANNING

A NEW VISION FOR THE LINCOLN FIELDS COMMUNITY

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The lands covered in this report are the traditional, unceded territory of the Algonquin Anishinabe Nation.

The contents of this document do not necessarily represent views and policies of the City of Ottawa or any other organization mentioned herein. The contents solely represent the advice and views of Queen's University School of Urban and Regional Planning authors as part of the 2019 SURP 824 Project Course.

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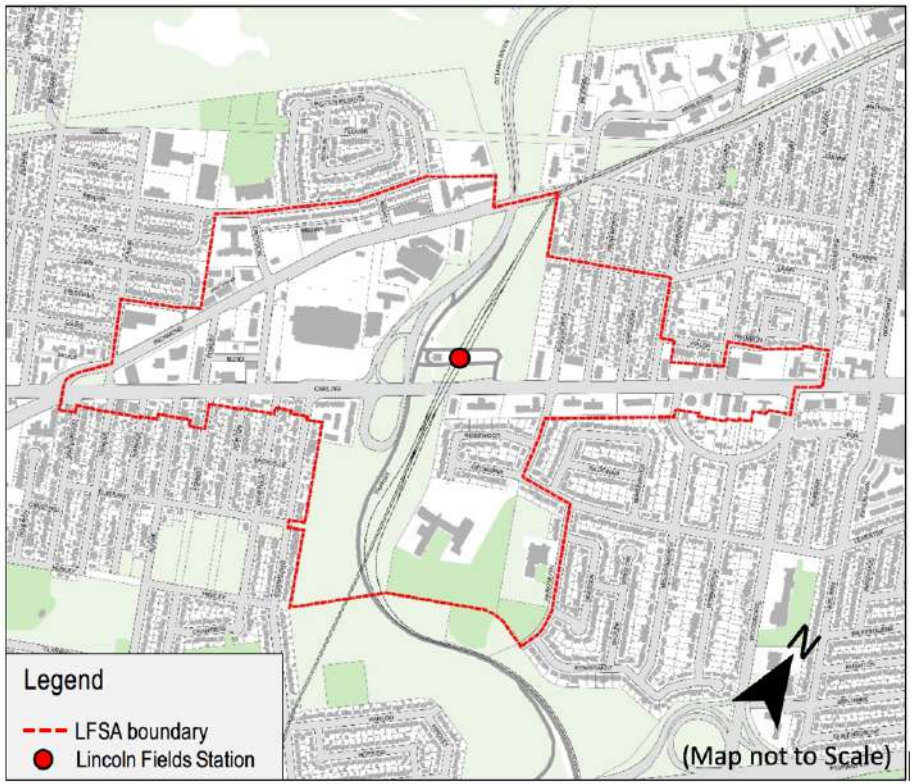
EXECUTIVE SUMMARY

OBJECTIVE

The City of Ottawa plans to extend their LRT system to the Lincoln Fields community as part of the Confederation Line West Extension program. The conversion of the existing Lincoln Fields BRT Station into a multi-modal hub will stimulate demand for intensification in the area. This proposal outlines a plan for redevelopment of the LFSA to ensure the area becomes a vibrant, livable, transit-oriented community.

The LFSA Plan identifies redevelopment constraints, such as the planned location for the Lincoln Fields Station and LRT track alignment.



VISION

To enrich and support the Lincoln Fields community through transit-oriented development, contemporary urban design, and diverse housing options.

GUIDING PRINCIPLES

The vision and guiding principles of the LFSA Plan are informed by analysis and organized around the "5 Big Moves." These are five policy directions that will define the new *City of Ottawa Official Plan*. The 5 Big Moves offer a comprehensive, holistic approach that informs the plan. The LFSA Plan adopts these principles to ensure redevelopment aligns with the latest City of Ottawa goals and vision. The guiding principles are as follows:

Create an affordable, compact, sustainable community through appropriate infill and mixed-use intensification

Provide safe, seamless connectivity that prioritizes sustainable transportation

Feature vibrant, sophisticated urban design that enhances the efficiency and experience of Lincoln Fields

Ensure sustainability through the creation and maintenance of green and social infrastructure

Promote the economic revitalization of Lincoln Fields through placemaking, flexible development, and appropriate commercial opportunities

PROJECT OUTLINE

After an initial site visit, existing conditions were further examined, as well as relevant governing policy, real-estate market data, site history. Key stakeholders for this project were interviewed. The team then conducted an extensive review of over 70 precedents to determine best practices for the LFSA. An overview of the LFSA's strengths, weaknesses, opportunities and challenges is shown below:

A design charrette was held, where local experts in transportation, urban design, and land-use planning came together to brainstorm a new vision for the LFSA. These generated ideas kick-started the team's design process.

CONCEPTUAL DESIGNS

To achieve the project vision, the team proposes two design concepts. Both are aligned with relevant policies and guiding principles. Concept 1 retains and mitigates three constraints in the LFSA: access to the Sir John A. Macdonald Parkway, the restricted development on NILM, and the location of Metro and Rexall – current anchor tenants at the Lincoln Fields Shopping Centre. Concept 2 envisions a Lincoln Fields where these constraints are removed, illustrating the benefit of stakeholder collaboration to improve options for redevelopment.

In both design concepts, the location of the Lincoln Fields Station and LRT track alignment, as proposed by OC Transpo, remains unchanged. The current Transitway running through the Sir John A. Macdonald Parkway Corridor will be removed to make way for future light rail track alignment.

Key elements of each concept are as follows:

	BUILT ENVIRONMENT	CONNECTIVITY	PUBLIC REALM
SHARED	• Transit-oriented development; • Consistent street frontage; • Tall buildings in appropriate locations	• Expanded path network; • Complete streets	• Expansion and activation of the Parkway Corridor; • Community centre
CONCEPT 1	• Requires larger blocks to achieve density due to NILM restriction	• Reduces rather than removing the Parkway; • Fewer mid-block connections	• More greenspace in redevelopment
CONCEPT 2	• Smaller blocks; • Diverse housing; • Development on NILM	• Parkway removed; • Pedestrian street leading to station	• Better quality of space due to removing the Parkway

Key development indicators were generated for both design concepts and compared an 'ideal target' transit-oriented development. The target development values are drawn from prior City of Ottawa TOD studies.

INDICATOR	EXISTING	CONCEPT 1	CONCEPT 2	TARGET
GROSS DENSITY	70	345	373	350
GROSS FSI	0.85	2.86	2.64	2.00
DWELLING UNITS	797	8,617	8,946	8,503
DWELLING UNITS PER HECTARE	15	165	171	163
RESIDENTS	6,509	15,579	16,058	15,257
JOBS	3,288	2,364	3,327	3,814
RESIDENTS/JOBS	1.9	6.6	5.2	4.0
MAXIMUM HEIGHT	21 storeys	26 storeys	26 storeys	26 storeys
PARKING	7,461	5,266	4,786	5,461
SITE AREA (HA)	140	52	52	52
PARKS (HA)	0.92	3.8	3.2	3.5
PARKS INCL. PARKWAY (HA)	14.9	17.8	17.2	17.5

The plan also devotes special attention to the Sir John A. Macdonald Parkway Corridor. This historic NILM was originally intended to provide scenic, leisurely access to downtown Ottawa, prioritizing natural amenity and user experience. To better achieve this vision, Concept 2 proposes ending the Parkway at Richmond Road and renaturalizing the entire corridor within the LFSA, creating an additional 7.5 hectares of unique, remarkable greenspace. This will transform the corridor into an extension of the Ottawa River South Shore. The space will provide green infrastructure, active and passive recreation, and better MUP connections to the station and surrounding environment.

Rendering of the reimagined Parkway Corridor, Concept 2

EVALUATING THE CONCEPTS

Both concepts achieve desirable outcomes; however, Concept 2 is preferred. Removing the Parkway creates more greenspace and connectivity; relocation of Metro and Rexall creates more space for diverse housing; and redevelopment on NILM focuses more intensification around the Lincoln Fields LRT Station:

Principle	Evaluation Criteria	Existing	Concept 1	Concept 2
Growth Management	affordable housing	◔	●	●
	mix of uses to support daily activities	◑	◕	◕
	sustainable intensification	○	●	●
	transit-supportive densities	○	◕	●
Mobility	active transportation infrastructure	◑	◕	●
	multi-modal connections	◔	◕	●
	pedestrian-priority street design	◔	◕	●
	reduced and obscured vehicle parking	○	●	●
	seamless integration of transit modes	◔	◕	◕
Built Form	animation of public space	○	◕	●
	activation of street frontage	○	●	●
	creation of landmarks	○	◕	●
	consistent street frontage	○	●	●
	human-scale design	○	◕	◕
	mid-block connections	◔	◕	●
	mix of building types	◑	◕	●
Resiliency	daylight Pinecrest Creek	○	◕	●
	green infrastructure	◔	◕	◕
	minimized ecological footprint	◔	◑	◕
	naturalization of the Parkway	◔	◑	●
	social and local community services	◑	●	●
Economic Development	appropriate office and retail space	◑	◕	◕
	commercial use in public space	○	●	●
	compact, efficient development	○	◕	●
	complete streets encouraging pedestrian retail	○	◕	●
	destination placemaking	○	◑	◕

KEY RECOMMENDATIONS

The LFSA Plan advances the following key recommendations, among others:

1. Remove the Sir John A. Macdonald Parkway between Richmond Road and Carling Avenue and renaturalize Pinecrest Creek
2. Revise the site plan for anchor tenants Metro and Rexall to allow flexibility in location
3. Establish direct MUP connections across the Lincoln Fields Shopping Centre site to the future transit station
4. Negotiate with RioCan to provide new community facilities as part of redevelopment on the Shopping Centre site
5. Create complete streets with cycle tracks, sidewalks, and reduced vehicle lanes on the large Carling Avenue and Richmond Road ROWs
6. Construct a pedestrian colonnade along Carling Avenue from the Shopping Centre site to the future LRT station
7. Remove and replace the proposed bus loop at Lincoln Fields Station through redeveloped street connections
8. Develop an Affordable Housing Strategy to identify City-owned properties for affordable housing and set targets for private landowners
9. Consider appropriate development on NILM closer to the Lincoln Fields LRT Station
10. Encourage a landmark flatiron building at the Carling Avenue and Richmond Road intersection

LIST OF ACRONYMS

BRT Bus Rapid Transit

FAR Floor Area Ratio

FSI Floor Space Index

GFA Gross Floor Area

LFSA Lincoln Fields Study Area

LRT Light Rail Transit

MUP Multi-use Pathway

NCC National Capital Commission

NILM National Interest Land Mass

ROW Right-of-Way

REIT Real Estate Investment Trust

TOD Transit-oriented Development

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CHAPTER 1: INTRODUCTION

The City of Ottawa is beginning a secondary planning process for the Lincoln Fields Station and surrounding area. The intent of this study is to inform their process by proposing a transit-oriented community design that embodies contemporary planning principles through the creation of a superior public realm and the provision of diverse housing options for residents of the area. The proposed design will spark dense and vibrant growth within the area and will support Ottawa in its goal of becoming the most livable mid-size city in North America.

1.1 PROJECT DEFINITION

The project team was retained by the City of Ottawa to create a planning vision to inform the future Secondary Plan for the Lincoln Fields Study Area (LFSA). The boundaries of the study area are illustrated in **Figure 1-1**.

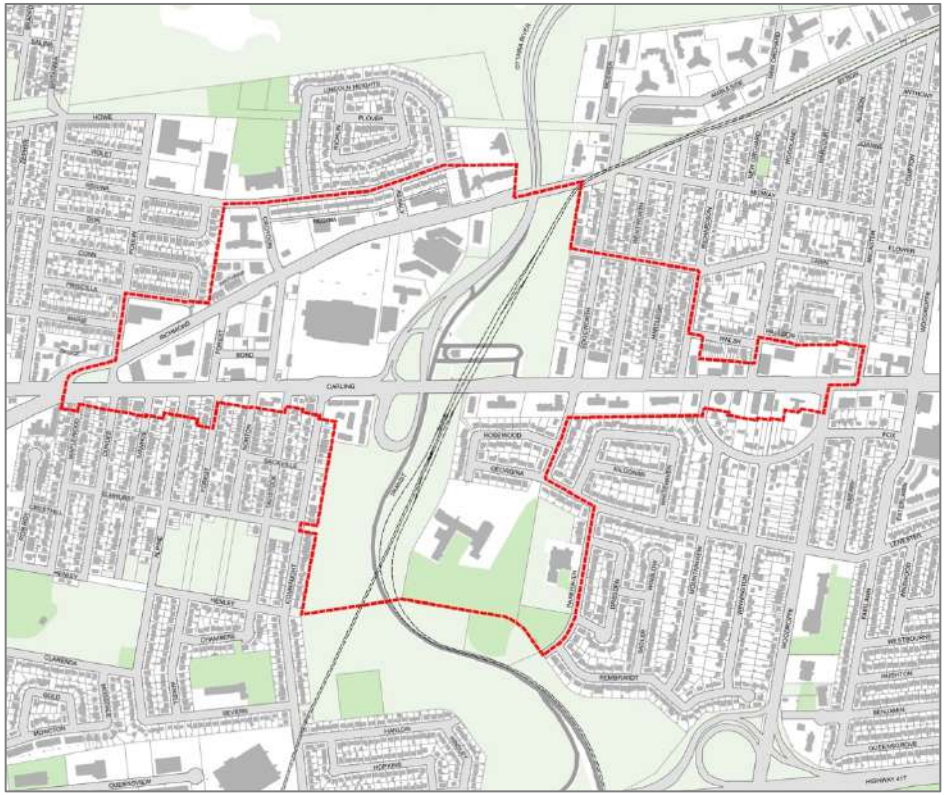

Figure 1-1: *Lincoln Fields Study Area boundary (adapted from City of Ottawa, 2019)*

The City of Ottawa is developing a Secondary Plan for the area because the current Lincoln Fields Bus Rapid Transit (BRT) station is being converted to Light Rail Transit (LRT) under the Confederation Line West Stage 2 Extension. The arrival of LRT will have significant implications for redevelopment.

Simultaneously, the nearby Lincoln Fields Shopping Centre is closing, creating a large greyfield parcel with high redevelopment potential. The Secondary Plan is therefore needed to address stakeholder interests and ensure transit-supportive redevelopment at Lincoln Fields. Through comprehensive analysis and design undertaken from September to December 2019, the project team developed a statement encapsulating the ultimate new vision for the Lincoln Fields community:

To enrich and support the Lincoln Fields community through transit-oriented development, contemporary urban design, and diverse housing options.

1.2 STUDY APPROACH

1.2.1 Stakeholder Interviews and Site Visit

The project team began analysis of the LFSA with a site visit on September 13, 2019. Prior to the site visit, interviews were conducted at Ottawa City Hall to better understand stakeholder interests, perspective, and priorities regarding Lincoln Fields (**Appendix C**). Stakeholders interviewed included professionals from the National Capital Commission (NCC), Fotenn Planning and Design, and City of Ottawa Policy and Transportation.

Following interviews, the project team walked the entire study area. Detailed notes and photographs were taken to record existing built form, quality of transportation, and important natural features. This data was consolidated to improve collective understanding of the area and conduct strengths, weaknesses, opportunities, and challenges (SWOC) analysis.

1.2.2 Research and Analysis

Following the site visit, the project team analyzed historical context, market data, and relevant policy to better understand the LFSA and develop future recommendations. Precedents were also analyzed to determine best planning practices in four categories relevant to the LFSA: greyfield redevelopment, mobility hubs, transit-oriented development (TOD), and creek renaturalization. Consolidation of this analysis informed the project vision, evaluation, and recommendations.

1.2.3 Design Charrette

Finally, the project team hosted a design charrette on October 25, 2019 (**Appendix E**). Diverse planning professionals from stakeholders including the City of Ottawa and NCC created designs for the LFSA that informed the final concepts proposed by the project team. First-year graduate students from the Queen's University School of Urban and Regional Planning (SURP) were also present.

1.2.4 Design Concepts and Evaluation

Following the design charrette, the project team began the formal design process. Two concepts were proposed, each illustrating the effect of three major development constraints at Lincoln Fields: the Sir John A. Macdonald Parkway, location of Metro and Rexall on the redeveloped Lincoln Fields Shopping Centre, and development restriction on National Interest Land Mass (NILM). Concept 1 retains and mitigates these constraints through design while Concept 2 envisions a Lincoln Fields without these constraints, revealing the benefit of stakeholder collaboration to improve design options. These final concepts were compared using evaluation criteria developed through research and analysis. Though both represent dramatic improvement of the existing conditions, Concept 2 is preferred and better fulfills the project vision.

1.2.5 Report Structure

This report is structured to correspond with the chronology of study. The report begins with site, stakeholder, policy, and SWOC analysis. Precedent studies informing the subsequent design charrette are introduced, culminating in discussion of the two design concepts. Finally, these concepts are evaluated through comparative analysis. Recommendations are presented to guide redevelopment according to the project vision, specifically Concept 2.

1.3 SITE LOCATION AND CONTEXT

The LFSA is located approximately 10 kilometres southwest of downtown Ottawa (**Figure 1-2**). The journey from downtown to the LFSA can be made in 20 minutes by car and 30 minutes by bus.

Figure 1-2: *The LFSA relative to Parliament Hill (Google Earth, 2019)*

The Sir John A. Macdonald Parkway meanders from downtown along the Ottawa River to Lincoln Fields Station. From here, the BRT Transitway continues south to the Queensway. The LFSA features two main arterial roads (**Figure 1-3**). Carling Avenue travels through the study area, and Richmond Road travels along the northern boundary. The LFSA is bisected by the Sir John A. Macdonald Parkway travelling north-south through the study area under Richmond Road and Carling Avenue.

Figure 1-3: *Aerial view of existing conditions at the LFSA. The Lincoln Fields Shopping Centre is highlighted in blue and the location of the Lincoln Fields BRT Station indicated with a star (Google Maps, 2019)*

The future LRT station will be located just north of Carling Avenue and east of the Parkway. Lincoln Fields Shopping Centre adjoins the west of the Parkway.

The LFSA roughly corresponds to the area between Richmond Road in the north, the Richmond Road and Carling Avenue intersection in the west, Woodroffe Secondary School in the south, and Ancaster Avenue in the east.

Neighbourhoods within and surrounding the LFSA are predominantly low-density, single-detached, residential areas. Major shopping and employment areas are located to the west at Bayshore and south of the Queensway. Algonquin College is three kilometres southeast of the LFSA. The Westboro neighbourhood is four kilometres to the northeast and directly accessible via Richmond Road. The LFSA is also close to natural recreation areas including Mud Lake (782 m), the Ottawa River (1 km), and Britannia Beach (1.5 km), as illustrated in **Figure 1-4**.

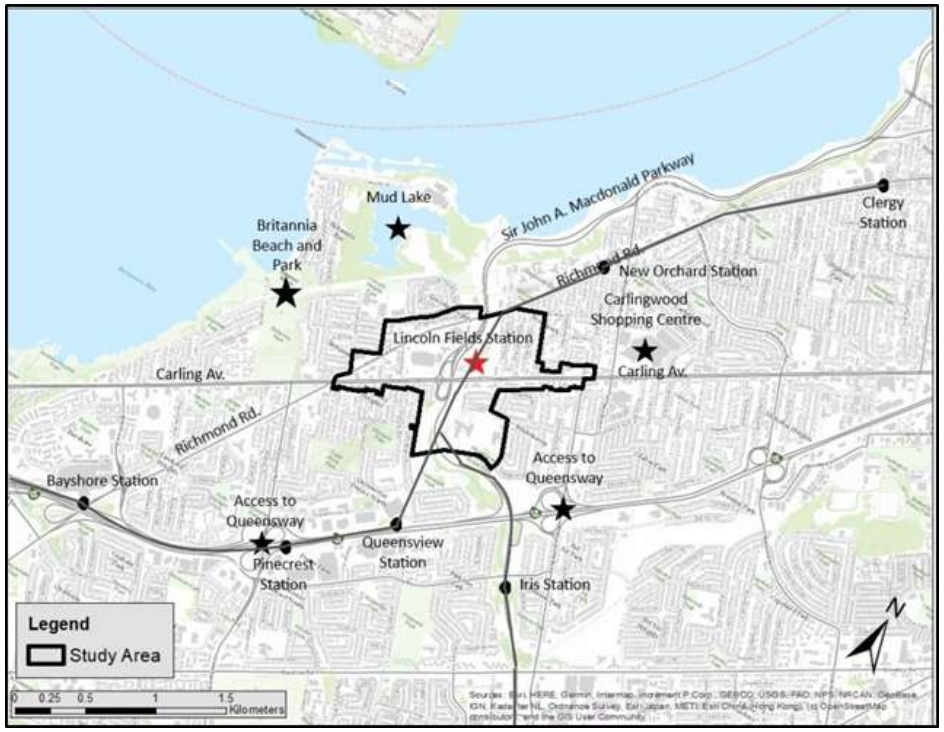

Figure 1-4: *Map of the LFSA and surrounding landmarks*

DRIVERS OF CHANGE

The Stage 2 LRT extension and closure of Lincoln Fields Shopping Centre has initiated this study by prompting intensification and redevelopment of the LFSA.

1.4.1 BRT to LRT Conversion: Lincoln Fields Station

The Confederation Line West is one of the three major extensions to Ottawa's LRT system, which will include the addition of 15 kilometres of rail and 11 stations. This extension will see the O-Train LRT continue from Tunney's Pasture to Moodie and Baseline Stations, as shown in **Figure 1-5**. The Confederation LRT Line West Extension is expected to be complete by 2023.

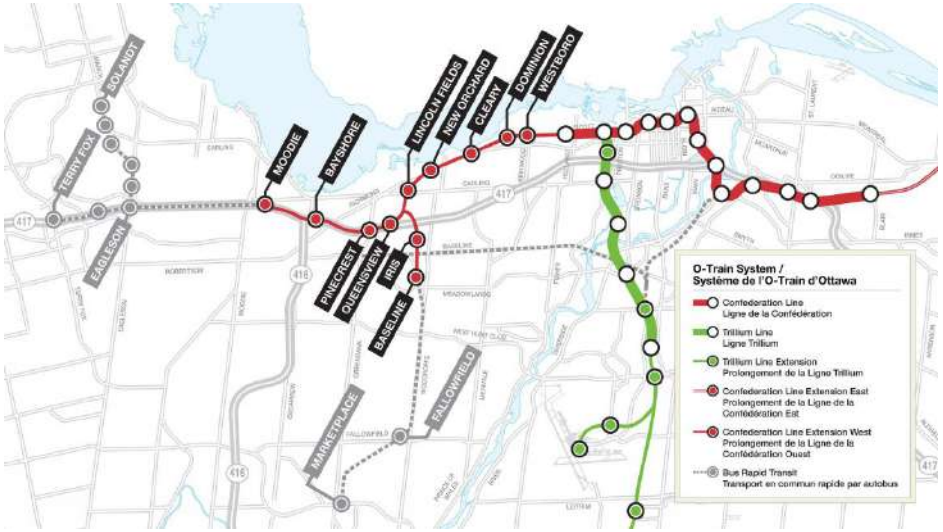

Figure 1-5: *Lincoln Fields (highlighted) will become an important LRT transfer point on the extended Confederation Line West (OC Transpo, 2019)*

The Pinecrest Junction immediately south of Lincoln Fields Station splits the LRT track alignments and will allow trains to serve both Baseline and Bayshore branches. A 2031 ridership forecast predicts 2,646 total boardings and alightings (AM peak hour) at Lincoln Fields Station. Lincoln Fields Station will therefore become a high-traffic transfer point for commuters. The station will also remain an important hub for local bus service. Given the diverse transit modes meeting at Lincoln Fields, the new Lincoln Fields Station will transform into a mobility hub servicing the area. Future planning for the LFSA should capitalize on this major public transit investment.

As part of conversion from BRT to LRT, the Transitway south of Carling Avenue will be removed and renaturalized (**Figure 1-6**). The future LRT alignment between Lincoln Fields, New Orchard, Iris, and Queensview Station will traverse NCC-owned greenspace at-grade (**Figure 1-8**).

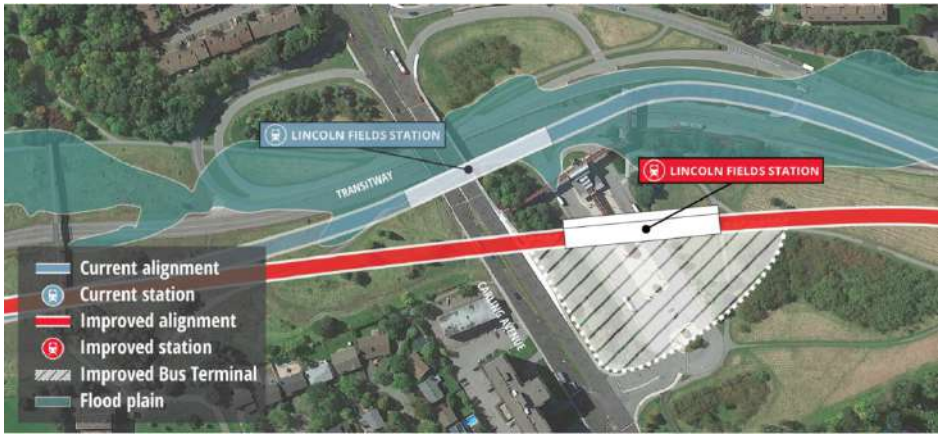

Figure 1-6: *Proposed Confederation LRT Extension West track alignment at Lincoln Fields Station bypassing the floodplain (City of Ottawa, 2017)*

Figure 1-7: *Rendering of the future Lincoln Fields Station entrance along Carling Avenue (City of Ottawa, 2018)*

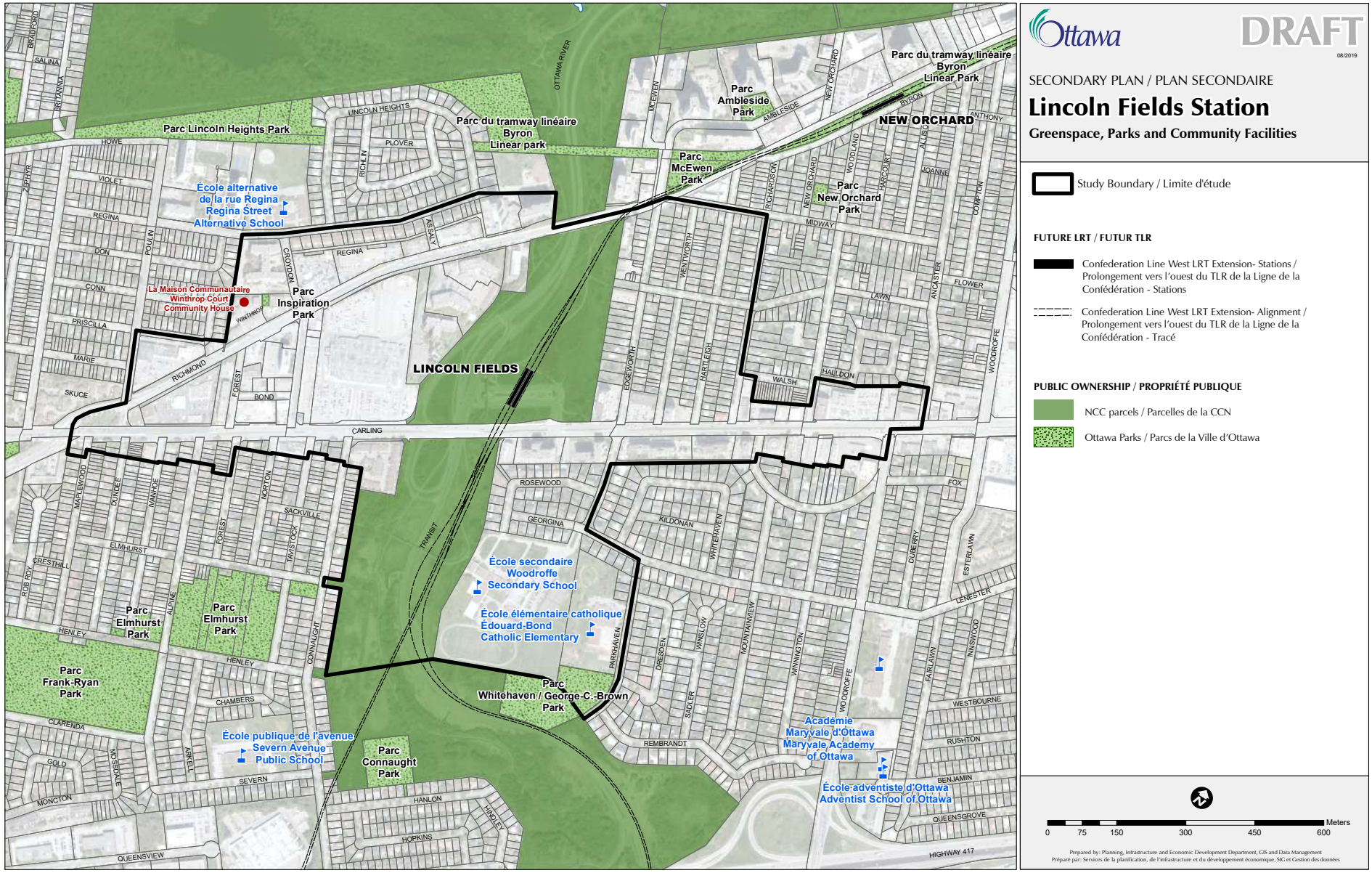

Figure 1-8: *Location of the future Lincoln Fields LRT Station relative to the LFSA boundaries (City of Ottawa, 2019)*

1.4.2 Closure of the Lincoln Fields Shopping Centre

Due to poor financial performance and changing retail trends, the Lincoln Fields Shopping Centre is set for closure and will be demolished in the near future. The landowner, RioCan Real Estate Investment Trust (REIT), will redevelop the site. RioCan has implemented interim redevelopment plans such as terminating the lease of smaller tenants. Lease obligations to the anchor tenants, Metro and Rexall, require that both retailers remain in operation during redevelopment.

As of late 2019, a Site Plan Control Application has been submitted to the City of Ottawa to permit two new structures for Metro and Rexall. The Lincoln Fields Shopping Centre greyfield is the largest property in the study area and is located across the Parkway from future LRT (**Figure 1-9**). This large site is of vital importance for intensification of the area and the creation of successful transit-oriented development (TOD).

Figure 1-9: *Lincoln Fields Shopping Centre looking northeast to Lincoln Fields Station, top right (Google Earth, 2019)*

1.5 PRINCIPLES FOR REDEVELOPMENT

To transform Ottawa into the most livable mid-sized city in North America, the City of Ottawa is renewing the Official Plan according to "5 Big Moves." This LFSA Plan adapts the 5 Big Moves to develop guiding principles for the project vision, evaluation, and recommendations. To align with the latest City of Ottawa vision, the project team has adapted and summarized the 5 Big Moves in relation to Lincoln Fields (**Table 1-1**).

Table 1-1: *Guiding principles for redevelopment of the LFSA*

	Create an affordable, compact, sustainable community through appropriate infill and mixed-use intensification
	Provide safe, seamless connectivity that prioritizes sustainable transportation
	Feature vibrant, sophisticated urban design that enhances the efficiency and experience of Lincoln Fields
	Ensure sustainability through the creation and maintenance of green and social infrastructure
	Promote the economic revitalization of Lincoln Fields through placemaking, flexible development, and appropriate commercial opportunities

1.6 SITE HISTORY

Development patterns have influenced the LFSA throughout history, culminating in the existing conditions. This history includes indigenous settlement and European colonialism, rural townships, and suburbanization.

1.6.1 Indigenous Settlement and European Colonization

Human settlement in the LFSA began with the Algonquin Anishinabe Nation, who thrived for thousands of years in the Ottawa River Valley (Elliott, 1991). As European explorers entered the region, the Valley became an important fur trading corridor. The Algonquin Anishinabe Nation allied with France in the 17th century and intensified fur trapping and trading along the Ottawa River. As the century progressed, the demand for furs and declining beaver population instigated war and conflict between the Algonquin Anishinabe Nation, France, and Great Britain. The Algonquin Anishinabe Nation were forced from their land during the late 18th and early 19th centuries due to European settlement, as Britain failed to observe their traditional land rights (Gangi, 2018). The LFSA and Ottawa Valley remain unceded Algonquin Anishinabe Nation territory.

1.6.2 Rural Townships

Surveying began for the British Township of Nepean in 1794 and was confirmed in 1830 (Elliott, 1991). Richmond Road, a dominant feature of the LFSA, was constructed in 1818 to provide direct connectivity from Ottawa. The angle of Richmond Road created intersections that were not conducive to orderly development (Elliott, 1991). During the 1850s, a small population and economic boom prompted mass unplanned subdivision along Richmond Road, altering established lot lines and dictating future roads. This cycle of unplanned subdivision occurred again in the early 1990s (Elliott, 1991), solidifying an incoherent street network and township layout.

1.6.3 Suburbanization

During the early 20th century, Nepean and the LFSA enjoyed economic prosperity and population growth. Major infrastructure such as paved roads, the Canadian Pacific Railway, and the Britannia Streetcar Line attracted development to the area. Unfortunately, the unplanned subdivision of the 19th century reduced the efficiency and coherence of this development (Elliott, 1991). Postwar suburbanization prompted significant additional subdivision after World War II.

In 1950, the City of Ottawa annexed large portions of Nepean, including the LFSA. Two defining elements of the LFSA were constructed during this period: the Sir John A. Macdonald Parkway and the Lincoln Fields Shopping Centre. First suggested by Frederick Todd in 1903, the Parkway was completed in 1967 to provide a scenic, riverfront leisure drive from the Queensway to central Ottawa. The Lincoln Fields Shopping Centre was built in 1972 to provide community retail and shopping. These features define the present low-rise, automobile-oriented LFSA.

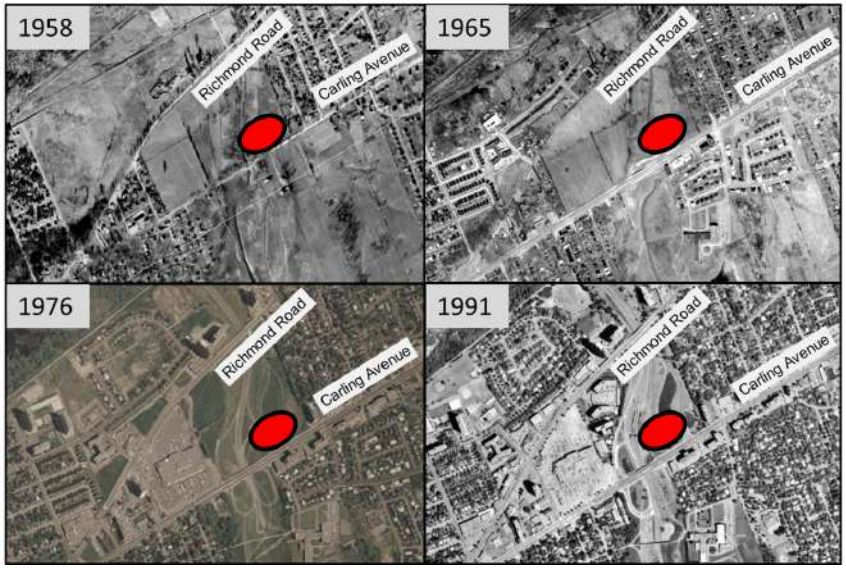

Figure 1-10: *Historic air photos of the LFSA with arterials labelled and the location of the current Lincoln Fields BRT Station marked (red) (GeoOttawa, 2019)*

The LFSA is now entering a new chapter. The changing retail market has forced closure of the Lincoln Fields Shopping Centre, the City of Ottawa is constructing a new LRT to service Lincoln Fields, and the NCC is reconsidering the Sir John A. Macdonald Parkway. There is potential to create a sustainable, transit-oriented future for the chronically under-planned LFSA.

CHAPTER 2: SITE ANALYSIS

This chapter assesses existing conditions within the LFSA, including natural features, community demographics, built environment, infrastructure, and connectivity. The resulting implications for redevelopment are discussed.

2.1 NATURAL AND ECOLOGICAL FEATURES

The LFSA contains and is close to numerous natural features (**Figure 2-1**). The LFSA is located within the Ottawa River and Pinecrest Creek watersheds. Despite these features, much of the LFSA is impervious pavement and most natural absorption capacity has been lost through urbanization.

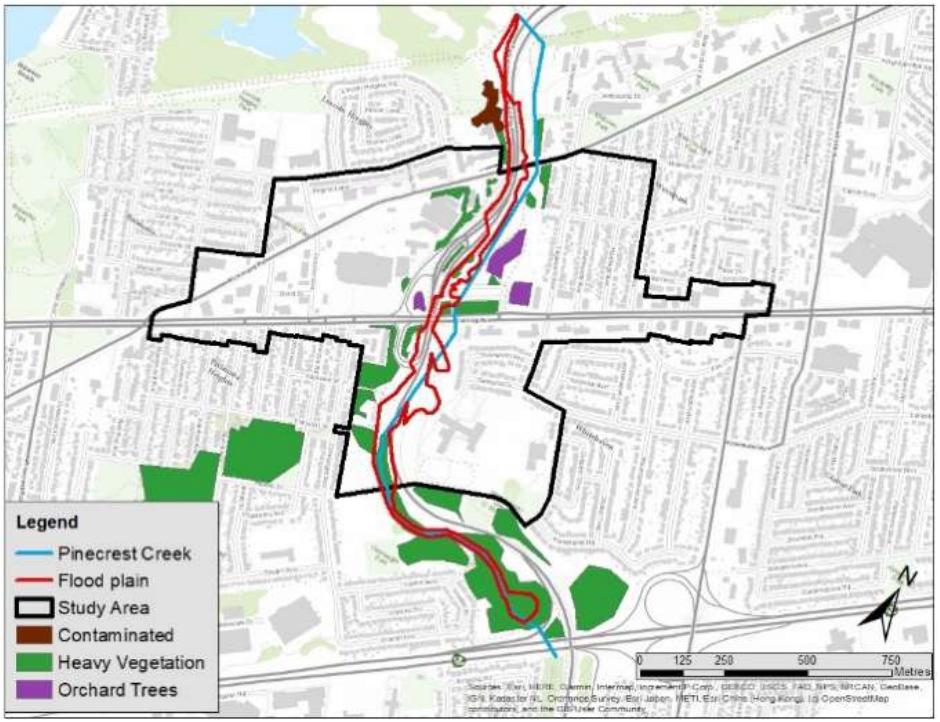

Figure 2-1: *Natural features of the LFSA, notably along the Sir John A. Macdonald Parkway Corridor and Ottawa River*

2.1.1 Topography

The LFSA features a central valley along the course of Pinecrest Creek. The Sir John A. Macdonald Parkway and future LRT alignment are flanked by this valley. The valley is eight metres below adjoining redevelopment sites. The Lincoln Fields Shopping Centre also features a one-storey grade change (**Figure 2-2**).

Figure 2-2: *One-storey grade differential on the Lincoln Fields Shopping Centre site (Google Maps, 2019)*

2.1.2 Landscaping

The Woodpark Common Ground Community Garden is part of a pilot program with the NCC and is located within the Sir John A. Macdonald Parkway Corridor, to the east of the Parkway, in proximity to Lincoln Fields Station.

Figure 2-3: *Woodpark Common Ground Community Garden location relative to the Sir John A. Macdonald Parkway (Google Maps, 2019)*

Utility work associated with future LRT construction will require the temporary relocation of the community garden. However, the City and the NCC have confirmed that a permanent Woodpark community garden will be constructed with water supply when the Stage 2 LRT program is complete. In addition, a parkette on Lawn Avenue will be implemented (**Figure 2-4**)

Figure 2-4: *Proposed replacement location for the Woodpark Common Ground Community Garden and Lawn Avenue parkette (City of Ottawa, 2017)*

In 1967, the NCC designed a crab-apple orchard within the Parkway Corridor as part of a landscape project to commemorate Canada's centennial celebration. The NCC has provided approval for the removal of the crab-apple orchard, located just north of Lincoln Fields Station, to make way for the construction of new LRT infrastructure. In response to community interest, the NCC has confirmed the preservation of 1/3rd of the crab-apple orchard, as well as a grove of English White Oak trees towards the west of the station.

2.1.3 Environmental Constraints

Urbanization and development have contributed to loss of flood storage capacity, increased erosion, water pollution, and restricted habitat corridors in the LFSA. In 2008, the NCC restored areas threatened by severe erosion. A 2011 Pinecrest Creek/Westboro Stormwater Management Retrofit Study identified further opportunities for improved water management and retrofit (Sabourin and Associates, 2011).

Floodplain

Portions of the Sir John A. Macdonald Parkway Corridor are within the Ottawa River 100-year floodplain. Prior to the construction of the Parkway, the Pinecrest Creek was present throughout the green corridor. In the past, severe storm events have inundated the Sir John A. Macdonald Parkway with floodwaters. This floodplain justifies OC Transpo's relocation of the future Lincoln Fields Station and track alignment (**Figure 2-5**) to mitigate flood risk of LRT infrastructure.

Figure 2-5: *OC Transpo's proposed track alignment and location for the Lincoln Fields LRT Station (City of Ottawa, 2019)*

The existing Transitway will be removed and the land will be returned to the NCC for reinstatement to its original natural condition. The future daylighted Pinecrest Creek will act as a low flow channel for some storm events. This realignment will also allow for the surrounding green corridor to be landscaped.

Contamination

A Federal Contamination Site has been identified at the former McGee Farm Landfill on NCC land immediately north of the LFSA (Golder Associates, 2004). The project team did not identify any other contaminated sites.

2.1.4 Implications for Redevelopment

The LFSA features many natural assets that should be protected and restored. Design concepts must align with existing agreements to preserve and relocate trees that will be removed as a result of the LRT construction. Areas for potential tree compensation must also be considered.

The Parkway Corridor and surrounding low-density neighbourhoods contain significant mature vegetation. To maintain neighbourhood character and environmental sustainability, vegetation clearing should be limited. New opportunities for tree planting should be identified, such as along arterials (Carling Avenue and Richmond Road) and at the Lincoln Fields Shopping Centre redevelopment site. Natural stormwater management techniques should be encouraged, and the natural state of Pinecrest Creek should be carefully restored to mitigate future flood events and elevate the aesthetic quality of the LFSA.

2.2 COMMUNITY PROFILE

2.2.1 Population

The LFSA population was 4,639 in 2016, equating to a gross density of 57 persons per hectare (Statistics Canada, 2016). The average before-tax household income was $79,276 in 2015, lower than the city-wide average of $106,372 (City of Ottawa, 2019). More than one-quarter of area residents are older than 65 (**Figure 2-6**).

2.2.2 Employment

In 2016 there were 3,248 jobs in the LFSA, or 40 jobs per hectare. The largest employment sector was healthcare and social assistance (**Figure 2-7**).

2.2.3 Housing Profile

Single-detached dwellings are the predominant housing type in the LFSA, followed by apartments (**Figure 2-8**). Approximately 51% of residents live in one-person households and 68.9% of households are renter households (Statistics Canada, 2016). The average monthly rent was $1,089 in 2019 for the Lincoln Heights/Britannia area (CMHC, 2019).

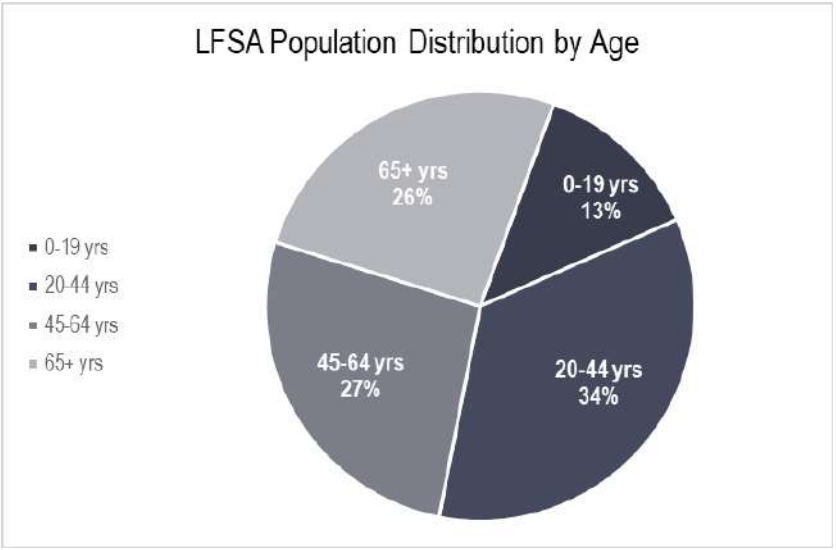

Figure 2-6: *The proportion of age groups within the LFSA (data from City of Ottawa, 2019)*

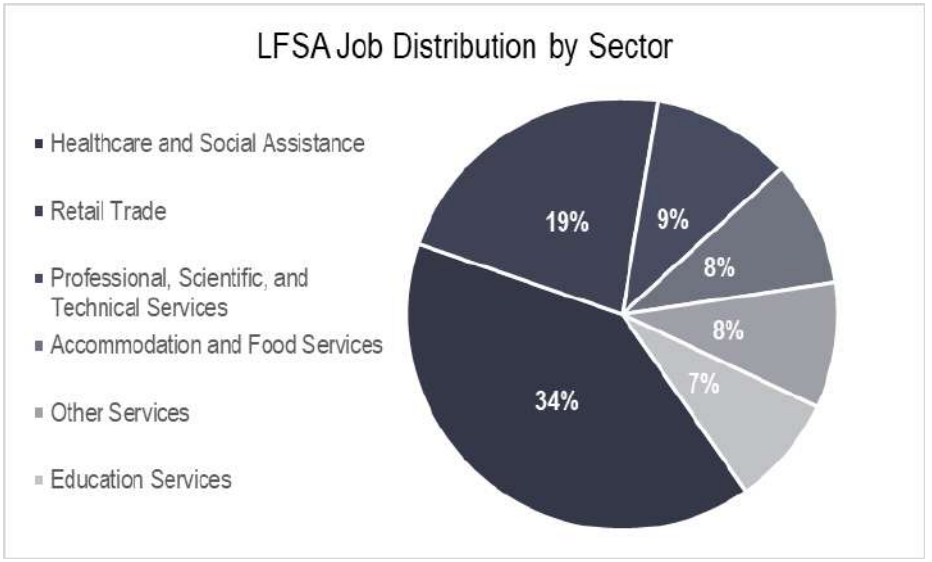

Figure 2-7*: Notable employment sectors in the LFSA (data from City of Ottawa, 2019)*

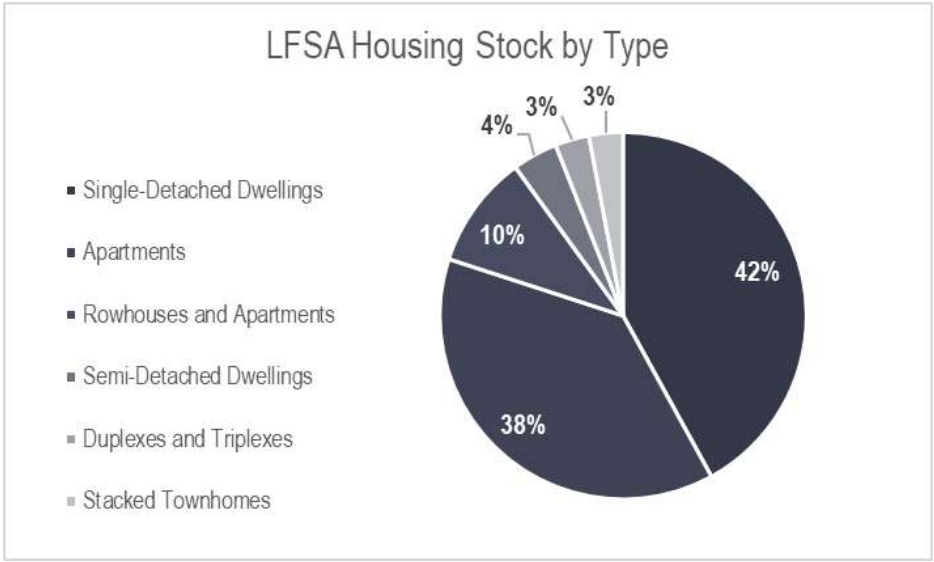

Figure 2-8: *Distribution of housing stock type in the LFSA (data from City of Ottawa, 2019)*

2.2.4 Land Ownership

Appendix A illustrates land ownership within the LFSA. Most parcels are privately owned. The City of Ottawa owns parcels along Richmond Road, Carling Avenue, and next to the Édouard-Bond Catholic Elementary School. A city-owned fire hall is located at the corner of Richmond Road and Croydon Avenue.

The 6.5-hectare Lincoln Fields Shopping Centre is owned and managed by RioCan REIT. This site is a large greyfield property with redevelopment potential.

The LFSA is bisected by the NCC-owned Sir John A. Macdonald Parkway Corridor. This property is designated National Interest Land Mass (NILM) by the NCC, meaning it cannot be sold or subdivided. The current and future Lincoln Fields Station is located on NCC property.

2.2.5 Centres of Activity

Activity in the LFSA is focused on the Lincoln Fields Shopping Centre, which contains Metro, a major grocery store (**Figure 2-9**). Significant activity also occurs at the Lincoln Fields BRT Station, a major transit hub where bus riders board, disembark, and transfer. Carling Avenue and Richmond Road are busy arterial roads with retail and apartment buildings. Woodroffe Secondary School and Édouard-Bond Catholic Elementary School are also important nodes.

2.2.6 Implications for Redevelopment

The LFSA Plan and future Secondary Plan should propose redevelopment that increases density to transit-supportive levels. Higher densities should be located around centres of activity such as the future Lincoln Fields LRT Station, Shopping Centre, and along major arterial roads. Future development on this property must also align with NCC policy and vision.

Active transportation is a priority, and design should accommodate existing senior populations. Affordable housing can be introduced in partnership with federal, municipal, or private landowners. The lack of “missing middle” housing (including rowhouses, townhomes, duplexes, and triplexes) is a gap in the LFSA real estate market that can be addressed to improve housing affordability and choice in the area. Given the large proportion of residents who live alone, housing choice, flexibility, and affordability should be prioritized.

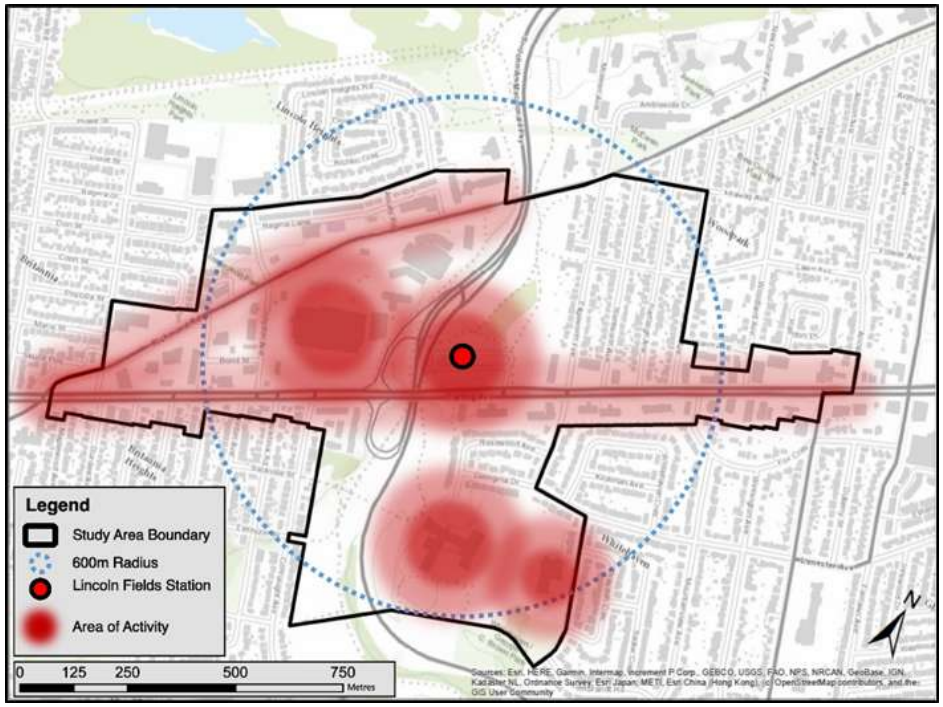

Figure 2-9: *Major activity nodes in the LFSA include two schools, the Lincoln Fields Shopping Centre, and Lincoln Fields Station*

2.3 BUILT ENVIRONMENT

2.3.1 Land Uses

The LFSA features four primary land uses: residential, commercial, institutional, and greenspace (**Figure 2-10**). This section will describe these four general uses. A more detailed property categorization is available in **Appendix A.**

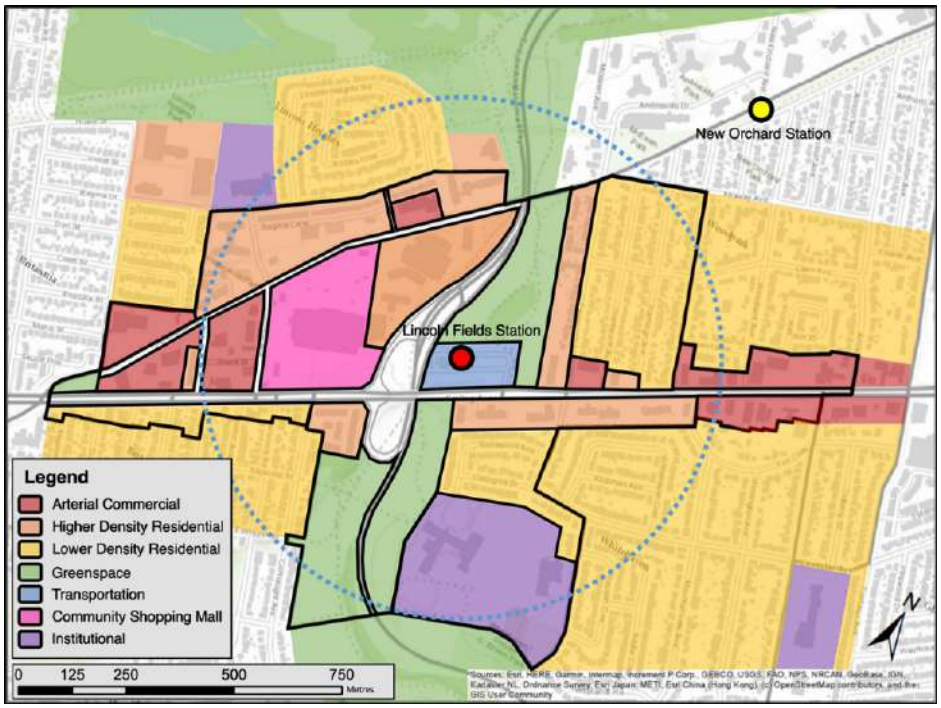

Figure 2-10: *Map of simplified land uses within the LFSA*

Residential Uses

Residential land uses represent approximately 33% of the LFSA (City of Ottawa, 2010). Eastern portions of the LFSA consist primarily of single- and semi-detached homes of various ages and sizes. Apartment buildings ranging from four to 11 storeys are located along Carling Avenue, catering mostly to renters and seniors.

Residential uses in the western LFSA vary from single- and semi-detached homes south of Carling Avenue (**Figure 2-11**) to a mixture of apartment buildings and townhomes situated along arterial commercial uses between Richmond Road and Carling Avenue (**Figure 2-12**). An Ottawa Community Housing (OCH) development is located on Richmond Road, including a community house that provides services and activities to the neighbourhood.

Figure 2-11: *Apartment building on the south side of Carling Avenue (SURP, 2019)*

Figure 2-12: *Single- and semi-detached homes in neighborhoods south of Carling Avenue (SURP, 2019)*

Figure 2-13*: Commercial uses as seen from Forest Street (SURP, 2019)*

Recent home conversions and lot severances indicate intensification and development pressure in the LFSA. This is evident in residential areas in the northeast, southwest, and southeast of the LFSA. Intensification is expected to continue in response to the future Lincoln Fields and New Orchard LRT Stations.

Commercial Uses

Commercial land uses are located primarily along Carling Avenue and Richmond Road. Businesses in the area include retail chains, automobile services, fast food restaurants, loan agencies, banks, medical offices and services, and a self-storage facility (**Figure 2-13**). Most commercial uses are within strip malls or standalone buildings on large greyfield sites and set back from the street.

The Lincoln Fields Shopping Centre is the largest commercial property in the LFSA (**Figure 2-14**). The Shopping Centre is soon to be demolished and the site redeveloped. Few businesses remain in the shopping centre and pedestrian traffic is minimal. Most activity is focused around anchor tenants Metro and Rexall.

Figure 2-14: *The Lincoln Fields Shopping Centre is a large greyfield with high vacancy and low pedestrian traffic (SURP, 2019)*

Institutional Uses

Woodroffe High School and the Édouard-Bond Catholic Elementary School are adjacent to the Parkway Corridor and are within short walking distance of Lincoln Fields Station. The western portion of the LFSA features a mosque, municipal fire station, and the Pinecrest-Queensway Community Health Centre. A Carefor Nursing Clinic is located on Carling Avenue near two Revera senior residences to the east and the Olde Forge Community Centre to the west. The Regina Alternative School and Parkway House - a long-term care home for adults with physical disabilities - is located just north of the LFSA boundary.

Greenspace

The LFSA benefits from abundant greenspace. Approximately 34.2% of the LFSA is considered open, active, or passive greenspace. However, passive recreation accounts for 23.5% of LFSA land area, mostly located within the Parkway Corridor. There are few public parks and opportunities for active recreation within the LFSA. Multi-use pathways (MUPs) define this passive greenspace (**Figure 2-15**). Active recreation parks are located adjacent to school sites. Inspiration Park is a small parkette located north of Richmond Road.

Ten municipal parks are close to the LFSA, including Elmhurst Park and Frank-Ryan Park in the south and Lincoln Heights Park and McEwen Park in the north. Most of these parks offer programming such as play structures and sports facilities. The LFSA is also within walking distance of substantial greenspace along the Ottawa River at Mud Bay and Britannia Beach.

Figure 2-15: *Substantial MUP networks run throughout the LFSA (SURP, 2019)*

Figure 2-16: *Location of Lincoln Fields Station in relation to NCC's Ottawa River South Shore Riverfront Park Plan (NCC, 2019)*

2.3.2 Built Form

Building Types

Building types within the LFSA vary according to use. Most residential dwellings are single- and semi-detached structures built during the 1950s and 1960s. Recent infill developments are primarily long semi duplexes that reflect more contemporary architectural styles (**Figure 2-17**).

Several large slab apartment buildings constructed during the 1970s and 1980s are located along and between Carling Avenue and Richmond Road. Townhomes and rowhouses are also present in the study area, though these represent a limited portion of total residential development.

Most commercial buildings are either one-storey strip malls or standalone structures (**Figure 2-19)**. The existing Lincoln Fields Shopping Centre is a large mall structure surrounded by surface parking. A five-storey self-storage building, one of the newest commercial developments in the LFSA, is located on the corner of Carling Avenue and Croydon Avenue.

Most buildings along arterial roads have large setbacks and are difficult to access on foot. Few buildings provide active street frontage, and most commercial buildings are separated from the street by significant surface parking.

There are no properties in the LFSA that have official heritage designation or are identified in the City of Ottawa Heritage Register.

Figure 2-17: *Low-rise residential infill occurring in neighborhoods in and around the LFSA (SURP, 2019)*

Figure 2-18: *Strip mall and high-rise apartment building along Richmond Road (SURP, 2019)*

Figure 2-19*: Aerial view of abundant parking on the north side of Richmond Road (Google Maps, 2019)*

Building Heights

Building heights in the LFSA range from one to 21 storeys (**Figure 2-19**). However, most are between one and two storeys, especially low-rise residential and commercial use buildings. Many of these low-rise structures are located within 600 metres of the Lincoln Fields Station.

Mid- and high-rise structures are located along and between Carling Avenue and Richmond Road, ranging from four to 21 storeys. A cluster of taller buildings are located west of the LFSA on Regina Street. The New Orchard community north of Richmond Road and west of the LFSA is composed of high-rises ranging from eight to 26 storeys. Transitions in building height are limited in the LFSA; many tall buildings are surrounded by greenspace or surface parking.

Figure 2-19: *Figure-ground map of the LFSA and surrounding area showing building heights*

Figure-Ground Analysis

Figure-ground analysis illustrates the distribution pattern and amount of development in an area. The LFSA figure-ground analysis (**Figure 2-19**) reveals that most low-rise residential neighbourhoods in the LFSA are compact. However, large swaths of open space define the Parkway Corridor and the arterial roads. Most properties along Carling Avenue and Richmond Road present opportunities for redevelopment. Large school buildings are located on the LFSA periphery, surrounded by open recreational space.

2.3.3 Density

Density, lot coverage, and floor space index (FSI) vary across the LFSA. To better illustrate the density of specific blocks, neighbourhoods, and nodes, the site is divided into six precincts (**Appendix A**). The overall LFSA density is 57 persons per hectare.

Higher residential densities are present along arterial roads (Carling Avenue and Richmond Road), ranging from 100 to 294 persons per hectare. Composed of a largely vacant mall and three apartments, the Lincoln Fields Shopping Centre precinct features a density of 43 persons per hectare and lot coverage of 26%.

In its current state, the LFSA is unable to sufficiently and effectively support mass rapid transit. Based on past City of Ottawa studies, the target density for suburban TOD should be between 200-410 persons and jobs per hectare (**Table 2-1**).

Table 2-1: *The planned density range of six previous TOD plans in Ottawa (City of Ottawa, 2014)*

TOD PLAN	GROSS DENSITY (PEOPLE AND JOBS PER HECTARE)
BLAIR	200-245
CYRVILLE	200-410
HURDMAN	200-365
LEES	250-330
ST. LAURENT	250-365
TREMBLAY	250-383

2.3.4 Vistas and Landmarks

The LFSA features several significant views, vistas, and landmarks (**Figure 2-20**). The most prominent and attractive view corridor is along the Sir John A. Macdonald Parkway and Pinecrest Creek Valley (**Figure 2-21**). Looking northwest toward the Ottawa River, tall buildings around Lincoln Fields and the Ambleside neighbourhood are visible. The Lincoln Fields Station is a landmark in the area and could be enhanced through intensification and redesign for LRT.

The intersection of Richmond Road and Carling Avenue provides a western gateway to the LFSA. There is potential to create a landmark building at this triangular intersection. Additionally, the NCC envisions a gateway to the Ottawa River South Shore where Richmond Road crosses the current Parkway (NCC, 2018). Tall buildings on the Lincoln Fields Shopping Centre site and along arterial roads could enjoy views of the Ottawa River and Parkway Corridor.

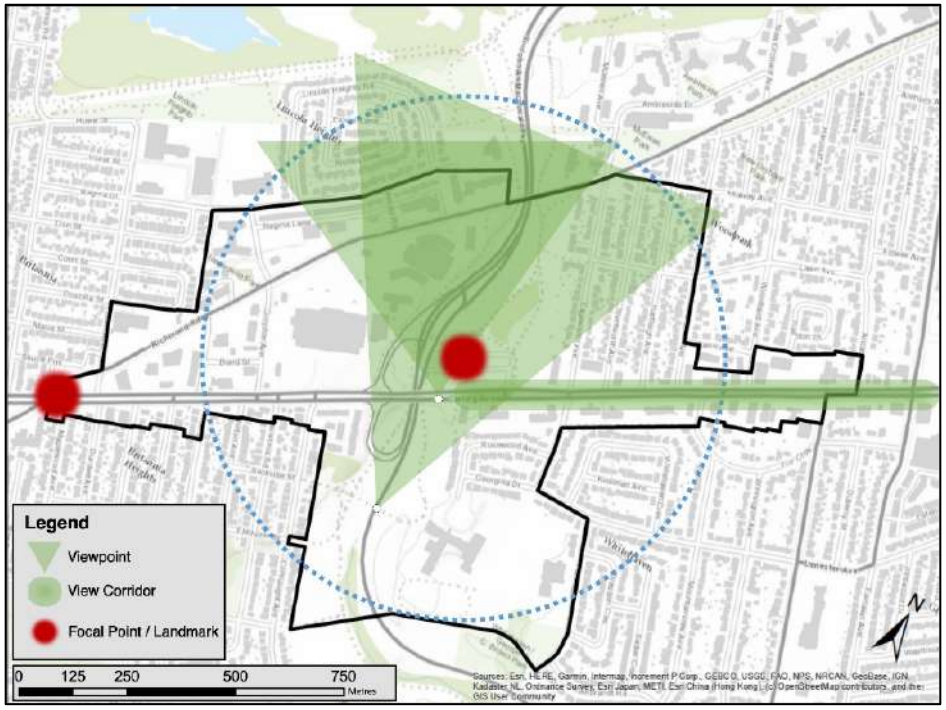

Figure 2-20: *Views, vistas, and landmarks in the LFSA*

Figure 2-21: *The Sir John A. Macdonald Parkway is a significant view corridor throughout the LFSA (SURP, 2019)*

Street-oriented slab apartments along Carling Avenue create a view corridor east of Lincoln Fields Station, though placemaking is limited (**Figure 2-22**).

Figure 2-22: *Slab apartments create a view corridor along Carling Avenue (SURP, 2019)*

2.3.5 Implications for Redevelopment

Large tracts of underutilized land create an impetus and opportunity for redevelopment within the LFSA (**Figure 2-23**). Redevelopment should achieve transit-supportive densities, create appropriate transitions in building height, and enhance present and potential vistas and landmarks. Greenspace should be activated, preserved, and enhanced. Additional institutional uses should be encouraged to meet the needs of new residents.

To increase densities to transit-supportive levels, higher densities should be concentrated around the Lincoln Fields Station to improve placemaking and efficiency of transit. Residential and retail intensification should be encouraged along the Carling Avenue and Richmond Road corridors. These large arterials can support significant active, public, and vehicular transportation. New development should be street-oriented, providing a more enjoyable and efficient travel experience along the corridors. Strong active transportation connections should also link areas of future intensification to public transit stations.

The Lincoln Fields Shopping Centre site is the best opportunity for redevelopment and intensification. The large, consolidated mall site is relatively close to Lincoln Fields Station and should experience significant redevelopment to create a compact, transit-oriented community. Attention must be devoted to providing efficient, inviting access to and from the station from this site.

Areas of single- and semi-detached housing should redevelop into mid-rise, multi-unit residential, especially near arterials and the Lincoln Fields Station. These areas should be connected to greenspace and public transit while maintaining a gentle transition to adjacent low-rise neighbourhoods.

Figure 2-23: *Vast greenspace and excess asphalt surrounding Lincoln Fields Station (Google Maps, 2019)*

2.4 INFRASTRUCTURE

2.4.1 Roadways

The LFSA road hierarchy (**Figure 2-24**) is dominated by the municipal Richmond Road (2-6 lanes) and Carling Avenue (4-8 lanes). The large greyfields along these arterials suffer from limited road and pedestrian permeability.

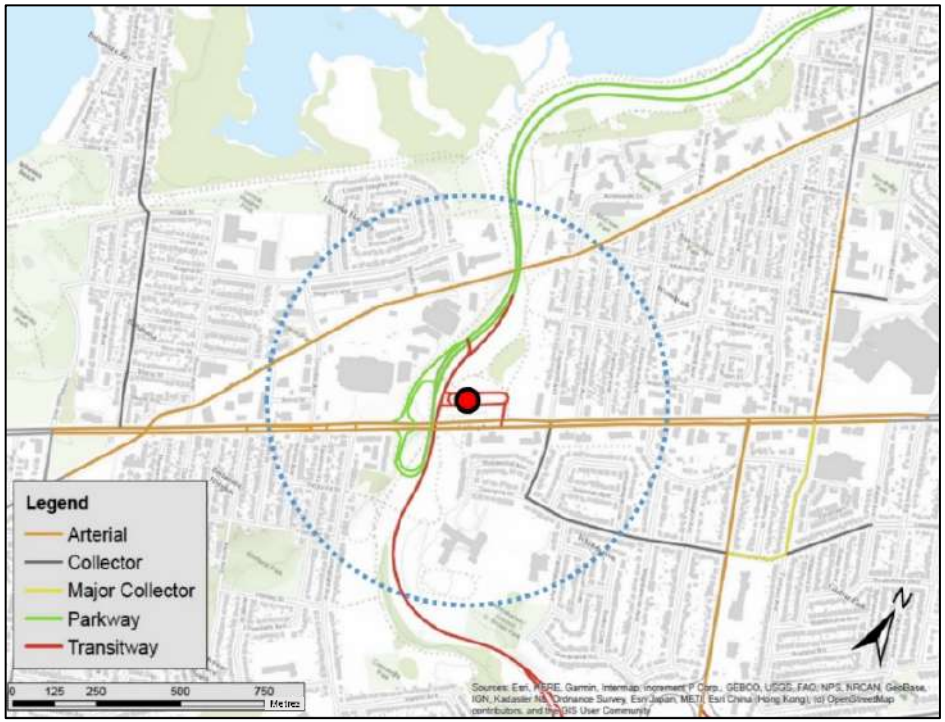

Figure 2-24: Road hierarchy and classification in the LFSA

Two collector roads (Britannia Road in the west and Edgeworth Avenue in the east) and various local roads connect the surrounding neighbourhoods to Carling Avenue and Richmond Road. Croydon Avenue is a busy local road between Carling Avenue and Richmond Road and is adjacent to the Lincoln Fields Shopping Centre.

The Sir John A. Macdonald Parkway is NCC-owned and bisects the LFSA from north to south. A ramp interchange connects the Parkway to Carling Avenue. The BRT Transitway begins just north Lincoln Fields Station and continues south to the Queensway but will be removed as part of the Stage 2 LRT program.

2.4.2 Water and Sewer Servicing

The LFSA is serviced with a 305-mm pipe on Richmond Road and 152-mm pipe on Carling Avenue. The combined capacity of these watermains is enough to service initial redevelopment on the Lincoln Fields Shopping Centre, though further redevelopment will require additional infrastructure. The large 450-mm pipe along the Sir John A. Macdonald Parkway Corridor ensures redevelopment is plausible in the near term.

2.4.3 Stormwater Management

Due to numerous paved and impermeable areas, stormwater runoff is significant within the LFSA. Stormwater management and overburdening has prompted the City of Ottawa and NCC to consider infrastructure retrofitting along the Pinecrest Creek Corridor. Green swales help manage stormwater and alleviate stormwater runoff in low-rise neighbourhoods within the LFSA.

2.4.4 Implications for Redevelopment

Existing water and sewer infrastructure can support immediate redevelopment and intensification in the LFSA. However, future redevelopment should also consider long-term needs. Impermeable surfaces should be reduced, and Pinecrest Creek should be renaturalized to improve stormwater management capacity. Road connectivity should be improved along arterial roads by building new roads in large greyfield properties such as the Lincoln Fields Shopping Centre. Access to the Lincoln Fields Station should be enhanced.

2.5 CONNECTIVITY

2.5.1 Pedestrian Network

Active transportation connectivity is inconsistent within the LFSA (**Figure 2-25**). Sidewalks along Richmond Road and Carling Avenue are often narrow and incomplete (**Figure 2-27**, **Figure 2-28**). Fast traffic and large setbacks render these sidewalks uninviting and inhospitable, and pedestrians are often forced to share the right-of-way (ROW) with automobiles.

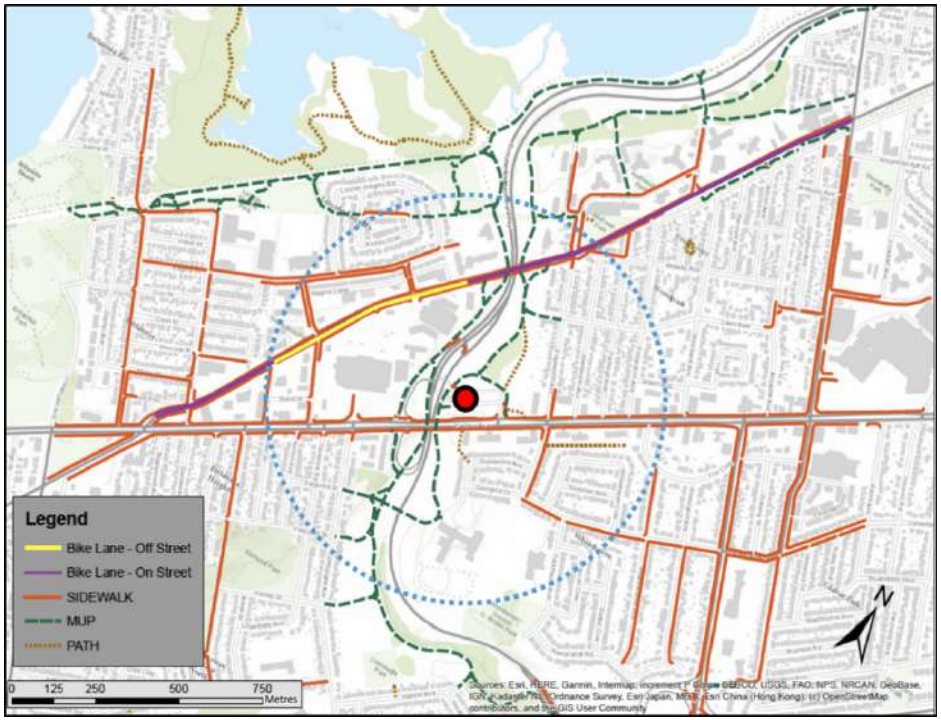

Figure 2-25: *Active transportation connectivity in the LFSA*

The existing Lincoln Fields Station is accessible by adjacent MUPs, and by the main entrance along Carling Avenue leading to covered pedestrian bridge (**Figure 2-26**).

Informal paths and desire lines link the station to surrounding neighbourhoods, showing where future networks could be considered. Pedestrians must cross the Sir John A. Macdonald Parkway to access the Lincoln Fields Shopping Centre from the station. Gaps have been cut along private fences lining the Parkway, suggesting formal pedestrian access is lacking. South of the Parkway, a footbridge spans the Parkway at Woodroffe High School.

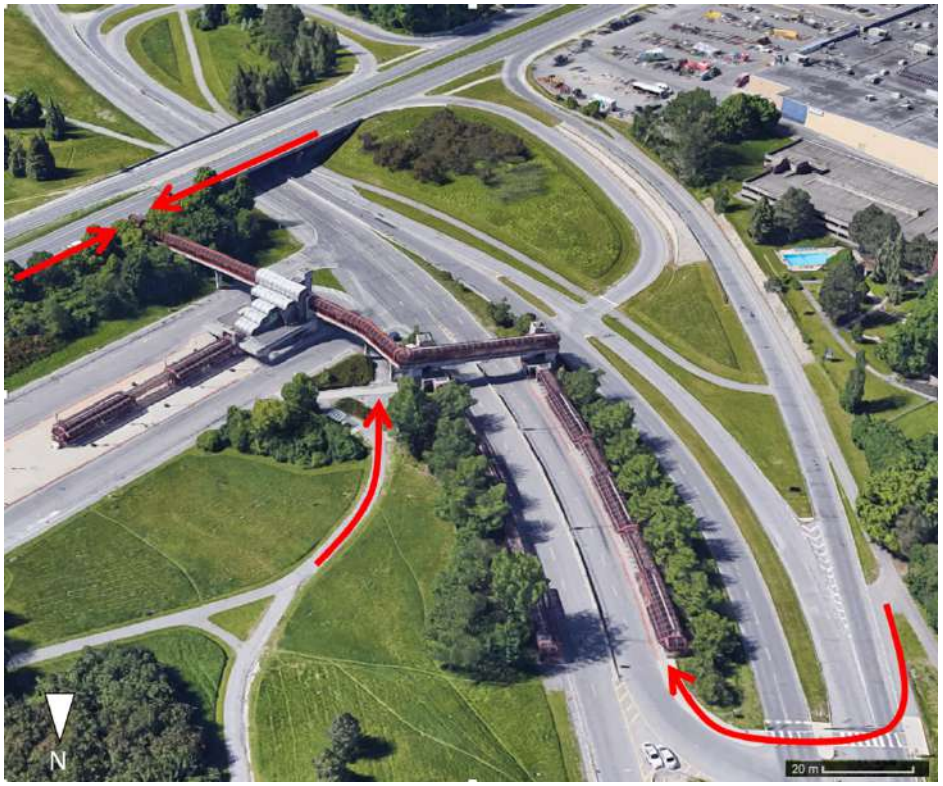

Figure 2-26: *Pedestrian access points to Lincoln Fields Station (adapted Google Maps, 2019)*

Figure 2-27: *Sidewalk on the Carling Avenue overpass, west of Lincoln Fields Station (SURP, 2019)*

Figure 2-28: *Missing sidewalks along Richmond Road (SURP, 2019)*

2.5.2 Cycling Network

Cycling connections are limited in the LFSA. Richmond Road benefits from a section of segregated cycle tracks (**Figure 2-29**), but this infrastructure is discontinuous.

An extensive MUP network along the Parkway Corridor provides cycling connections to the Lincoln Fields Station and the Ottawa River. However, cyclists can only cross the Parkway at New Orchard Avenue, Lincoln Fields Station and Carling Avenue, and the footbridge at Woodroffe High School. Parking spaces for approximately 36 bicycles are provided at the Lincoln Fields Station.

Figure 2-29: *Existing cycle tracks along Richmond Road (SURP, 2019)*

2.5.3 Public Transit Network

The Lincoln Fields Station services BRT and local bus routes, as shown in **Figure 2-30**.

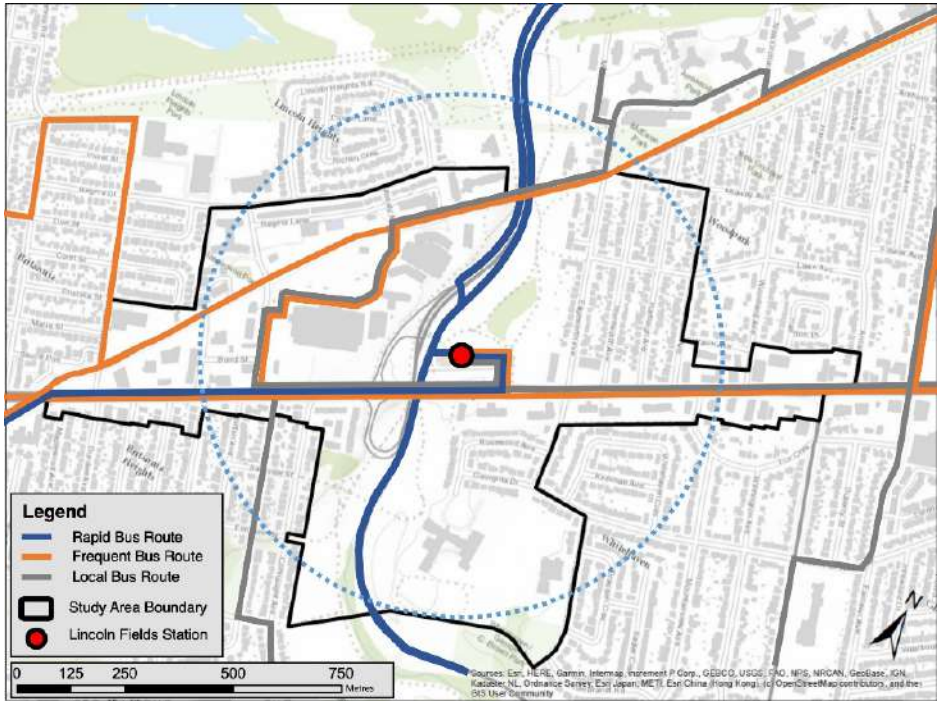

Figure 2-30: *Existing transit network within the LFSA*

Multiple bus routes connect the LFSA to other areas of Ottawa via the Sir John A. Macdonald Parkway and Transitway. Tunney's Pasture LRT Station can be reached in 10 minutes by bus from Lincoln Fields. Rapid bus routes also connect Lincoln Fields to Bayshore in the west. Frequent bus routes run along the Carling Avenue and Richmond Road corridor and through the Lincoln Fields Shopping Centre (**Figure 2-31**, **Figure 2-32**). For most routes, Lincoln Fields Station is a transfer point. The bus routes that currently access the Lincoln Fields BRT Station are expected to change upon conversion to LRT.

Figure 2-31: *A bus stop in front of the Lincoln Fields Station along Carling Avenue (SURP, 2019)*

Figure 2-32*: Bus stop on Carling Avenue for the Lincoln Fields Shopping Centre (SURP, 2019)*

2.5.4 Vehicular Network

The LFSA is auto-oriented. Higher-order streets like Carling Avenue and Richmond Road are significantly wide to facilitate the fast and easy movement of motor vehicles (**Figure 2-33**). Carling Avenue and Richmond Road connect the LFSA from east to west. The area between these arterials lacks permeability and is characterized by large greyfield superblocks. The Sir John A. Macdonald Parkway is a unique road intended to provide scenic, low-speed, low-volume access to central Ottawa from the Queensway. However, the Parkway has become a high-speed commuter route, contrary to NCC intentions. The Parkway also impedes active transportation connections to the Lincoln Fields Station by bisecting the central greenspace.

2.5.5 Implications for Redevelopment

The LFSA must balance objectives for the Parkway with future redevelopment. Improvements to the pedestrian realm and cycling infrastructure should be prioritized, creating a more livable, efficient, and sustainable Lincoln Fields community. Segregated cycle tracks should be extended along Richmond Road and added along other arterials. New connections allowing access to Richmond Road from the Parkway Corridor should be considered. Automobile traffic lanes should be reduced to limit speed and foster active transportation. Seamless connections between transportation modes should be prioritized. New street grids should be considered to improve the permeability of greyfield superblocks along Carling Avenue and Richmond Road. The wide ROWs along these arterials can be re-allocated to serve multiple modes of transportation. An additional active transportation bridge should span the Parkway Corridor, connecting Lincoln Fields Station to redevelopment at the Lincoln Fields Shopping Centre site.

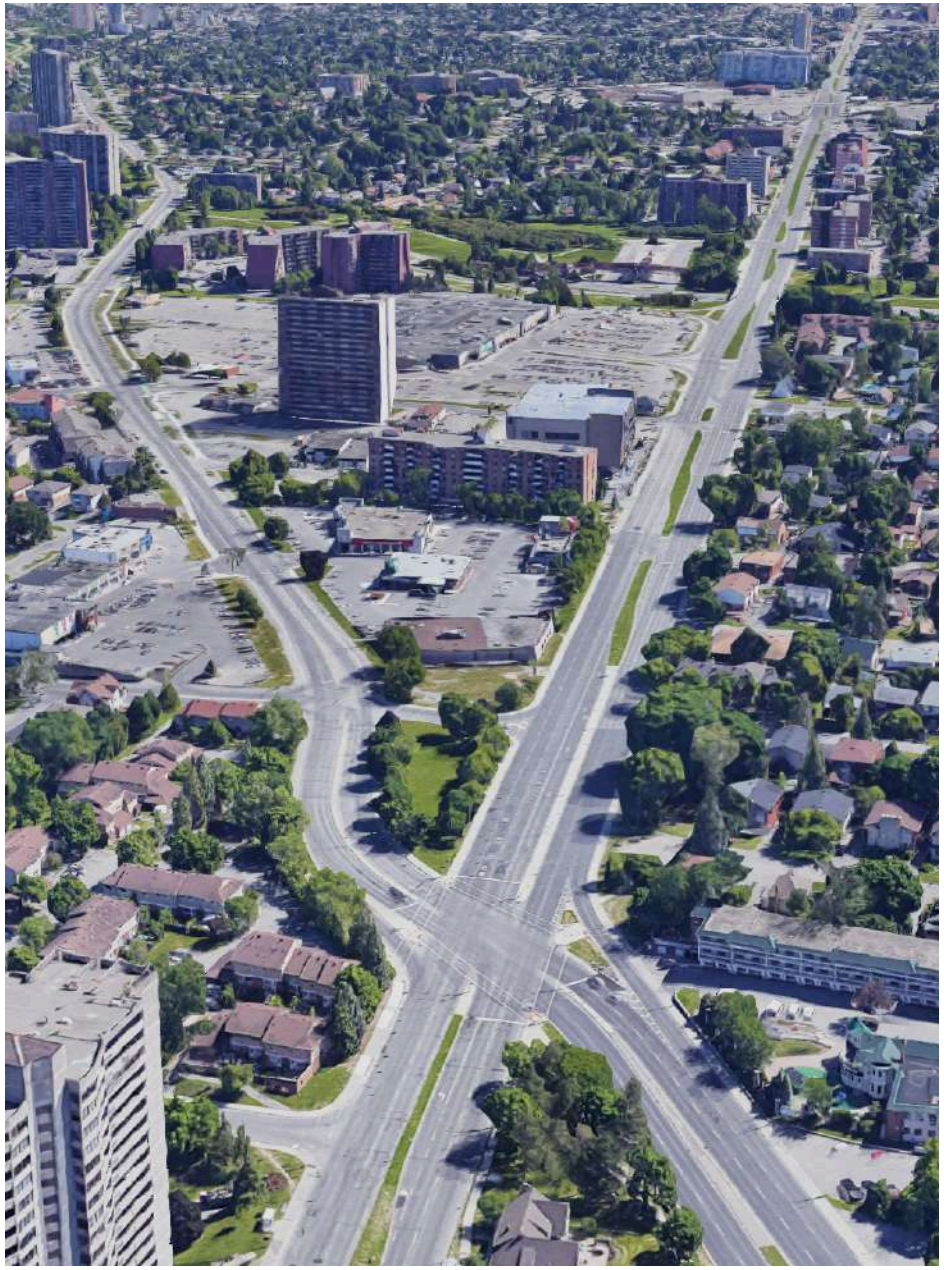

Figure 2-33: *Eastbound view from the wide intersection of Carling Avenue and Richmond Road (Google Maps, 2019)*

CHAPTER 3: MARKET ANALYSIS

This chapter analyzes the office, retail, and residential real estate market trends within the LFSA. Future redevelopment must consider the potential for office space, decline of big box retail, and significant need for diverse, affordable housing at Lincoln Fields. More extensive analysis and supporting figures are provided in **Appendix B**.

3.1 OFFICE MARKET

The federal government and high-tech sector dominate office space in Ottawa but have no presence in the LFSA. However, mixed-use TOD could encourage future clustering of large employers near LRT stations (Marcus & Millichap, 2019). Additionally, the downtown Ottawa office market is experiencing limited new construction. Tenants requiring space quickly may need to consider exploring options outside of established locations (PWC, 2019). This means latent demand for office space could exist at Lincoln Fields. Mixed-use TOD including office space at Lincoln Fields could address the undersupply of office space in Ottawa.

3.2 RETAIL MARKET

Ottawa West currently enjoys a 3% retail vacancy rate. However, the neighbourhood mall vacancy rate has climbed from 5.2% in Q4 2018 to 6.8% in Q2 2019 (Cushman & Wakefield, 2019). There is evidence of mall and big box closures throughout Ottawa West, perhaps most notably at the Lincoln Fields Shopping Centre. This suggests a changing retail market. Landlords have been forced to rethink the big box anchor tenant model and redevelop for mixed-use residential and retail (Cushman & Wakefield, 2019).

3.3 RESIDENTIAL MARKET

Ottawa-wide trends signal an undersupply of affordable rental housing. The proportion of the population living in rental housing has increased by 3% since 2016, while the supply of units has increased by just 1% in that period (CMHC, 2019). Prices for rental apartments and houses have risen by 7.8% and 11.8% respectively, prompting a shift in development to rowhouses and apartments (CMHC, 2019).

According to CMHC (2019), 43% of residents in Britannia/Lincoln Heights live in unaffordable housing, meaning that 30% of after-tax income is spent on housing. The average rent of $1,089 per month is relatively high compared to surrounding areas (CMHC, 2019). Additionally, at 1.0% and 0.7% respectively, vacancy rates for one- and two-bedroom apartments are extremely low even compared to the low Ottawa average of 1.7%. These rates suggest a significant shortage of affordable and rental housing in both Ottawa and the LFSA.

3.4 IMPLICATIONS FOR REDEVELOPMENT

Redevelopment in the LFSA should address the significant housing shortage, illustrated through low vacancy rates and unaffordable housing. Intensification, diverse housing choice including missing middle options, and mixed affordable and market rental buildings would meet the needs of diverse demographics, especially low-income earners.

Limited construction and lack of options has resulted in unmet demand for office space in Ottawa. Tenants who cannot secure space due to undersupply and high lease rates will need to find alternative areas that meet their operational requirements. Due to incoming LRT, the LFSA is one such option. Mixed-use development in the LFSA should consider the potential for office space, since employers may seek to acquire space outside the downtown core in areas that benefit from lower lease rates while remaining connected to the city.

Neighbourhood, Community, and Power & Regional Malls are struggling in Ottawa, with the Lincoln Fields Shopping Centre being a prime example. Redevelopment should transition current greyfield sites into high-density, mixed-use residential communities with appropriate street-oriented retail to meet the needs of present and future residents.

The City of Ottawa (2019) encourages mixed-use redevelopment that incorporates retail, office, and residential uses. Through redeveloping single-use properties into mixed-use communities along LRT, the City of Ottawa hopes to encourage future employment, retail, and residential use (City of Ottawa, 2019). The LFSA Plan should promote mixed-use office, retail, and residential development to meet current and future market demands.

CHAPTER 4: STAKEHOLDERS

This chapter identifies and discusses key groups and individuals that may have an invested interest in the present and future of the LFSA. Working alongside stakeholders to identify needs and interests will assist in creating a plan for the LFSA that is desirable for all parties.

Within this chapter, “stakeholder” means an individual, organization, or institution that can impact the project or is impact by the project (Newcombe, 2003) Stakeholder analysis identifies areas of potential conflict along with avenues for cooperation and collaboration. Though some stakeholders have more influence than others, the opinion and interests of all concerned parties should be considered. Public engagement is beyond the scope of this LFSA Plan but should feature prominently in the future Secondary Plan.

4.1 IMPLICATIONS FOR REDEVELOPMENT

This stakeholder analysis charts the interests, jurisdiction, and resources of key people and groups in the LFSA, which identifies the relationships that will influence redevelopment. While stakeholders such as the City of Ottawa, NCC, and RioCan REIT will play a central role in development initiation and coordination, various community and public groups will significantly influence the process. Stakeholders less directly involved in redevelopment should be recognized and have their interests considered. Successful redevelopment of the LFSA will depend on engagement, coordination, and collaboration among numerous stakeholders.

Figure 4-1: *Community members gather at a Lincoln Fields Secondary Plan open house to provide feedback (City of Ottawa, 2019)*

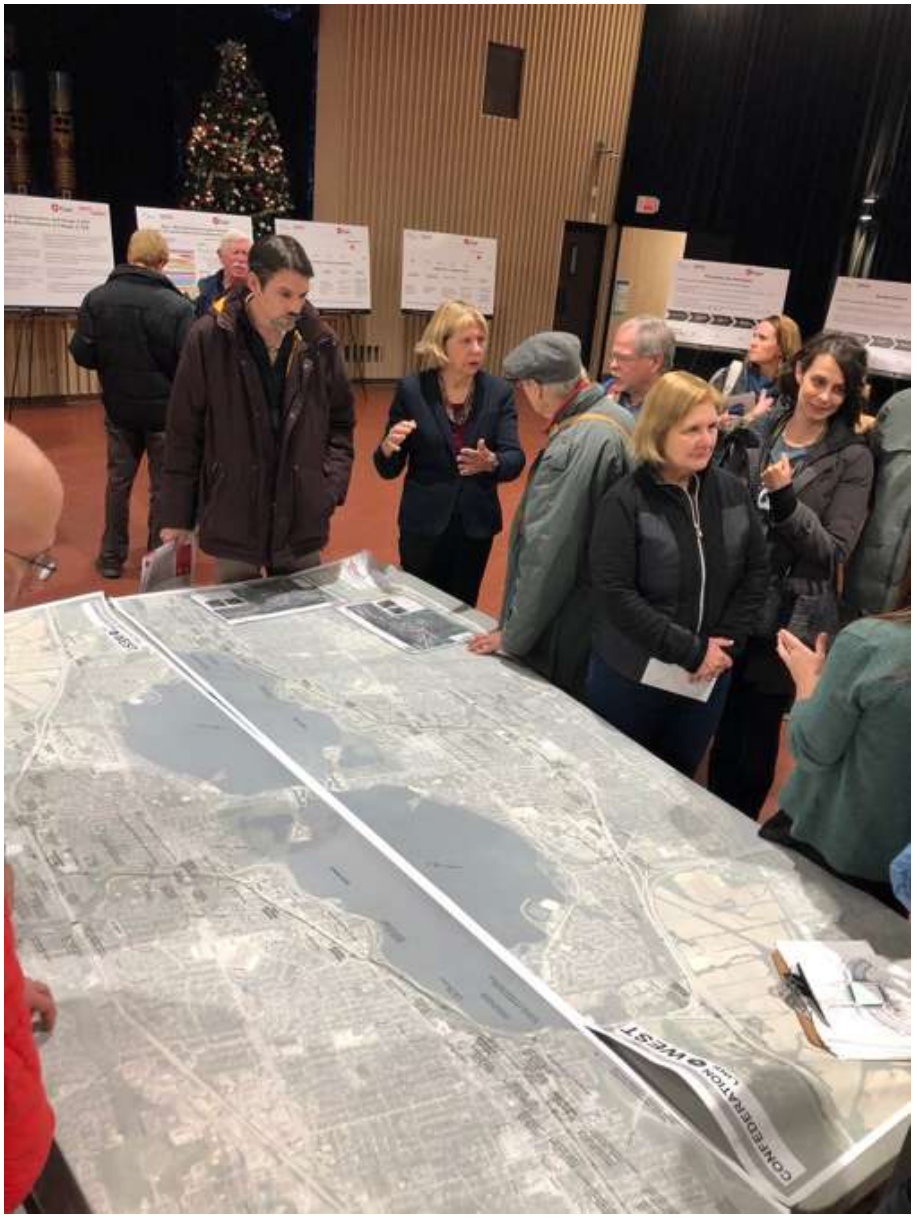

Figure 4-2: *Bay Ward Councillor Theresa Kavanagh talking with community members at a Lincoln Fields Secondary Plan open house (City of Ottawa, 2019)*

***Table 4-1**: Stakeholder analysis table*

STAKEHOLDER	INTEREST(S)	RELATION TO THE LFSA	METHOD OF INFLUENCE
THE CITY OF OTTAWA	Sophisticated urban design and intensification Sustainable transportation Public health and environmental resiliency Economic development Housing affordability	Responsible via the Province of Ontario for managing planning policy and development control within municipal boundaries, including the LFSA	Secondary Planning Process Development application review
OTTAWA CITY COUNCILLORS	Maintaining and improving the quality of life for Ottawa residents and constituents Increasing the profile of Ottawa	Represent the best interest of Ottawa residents, including the LFSA	Approval authority for planning measures in the LFSA
OC TRANSPO	Transit-supportive development Efficient public transit operation	Safe, reliable, efficient public transit	Design and location of the Lincoln Fields Station
RIOCAN REIT	Successful, profitable redevelopment of the failed Lincoln Fields Shopping Centre	Largest private landowner in the LFSA	Development application process Committee of Adjustment Local Planning Appeals Tribunal (LPAT)
COMMERCIAL LANDOWNERS	Improve financial performance, land and building value	Advocate through Business Improvement Associations, City Council, and Planning Committee	Development application process
LOCAL COMMUNITY ASSOCIATIONS	Maintain and improve the public realm Access to transit, local shops, and services Housing affordability	Right to participate in the planning process Self-determination in how the community should develop	Planning Committee Committee of Adjustment LPAT
GENERAL PUBLIC	Safe and efficient travel through the LFSA Access to amenities in the LFSA	Travelling through and visiting the LFSA Right to participate in the planning process	Municipal elections Planning Committee Committee of Adjustment LPAT
TRANSIT USERS	Safe and efficient travel through the LFSA Access to amenities in the LFSA	Travelling through and visiting the LFSA Right to participate in the planning process	Personal and community lobbying Municipal elections LPAT
LFSA RESIDENTS	Affordable and varied housing options Amenities to support daily life Efficient connection to amenities	Right to participate in the planning process Living within the LFSA	Personal and community lobbying Municipal elections LPAT
OFFICE TENANTS	Affordable and varied office spaces that suit operational need Proximity to transit, ease of access for existing and potential employees	Right to participate in the planning process Working and leasing within the LFSA	Market forces Personal and community lobbying Municipal elections LPAT
RETAIL TENANTS	Affordable and suitable retail space Proximity to transit High traffic from multiple transit modes	Right to participate in the planning process Retailing and leasing within the LFSA	Market forces Personal and community lobbying Municipal elections LPAT

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CHAPTER 5: POLICY

An extensive review of existing policy documents was conducted as relevant to the LFSA. This chapter provides an overview of these policies by jurisdiction, and subsequent implications for redevelopment. **Appendix D** describes each policy in detail.

Policy implications are summarized in **Table 5-1**. Detailed descriptions of each applicable federal, provincial, and municipal policy are included in **Appendix D.**

5.1 FEDERAL POLICY

Important federal policies for the LFSA address NCC interests and affordable housing strategies. NCC policies are significant to the study, as it is crucial that the proposed redevelopment align with the NCC's vision for Ottawa. The NCC-owned Sir John A. Macdonald Parkway is a defining element of the LFSA, as shown in **Figure 5-1**. In determining recommendations for redevelopment at Lincoln Fields, the LFSA Plan should recognize and respect NCC's vision for the Parkway while reconciling these goals with future TOD. NCC policies advocate for the retainment and enhancement of the Parkway through improved greenspace and gateway connections to the Ottawa River. Finally, the LFSA Plan should align with recommendations from Canada's *National Housing Strategy* (2017) to ensure the housing needs of vulnerable populations are appropriately addressed.

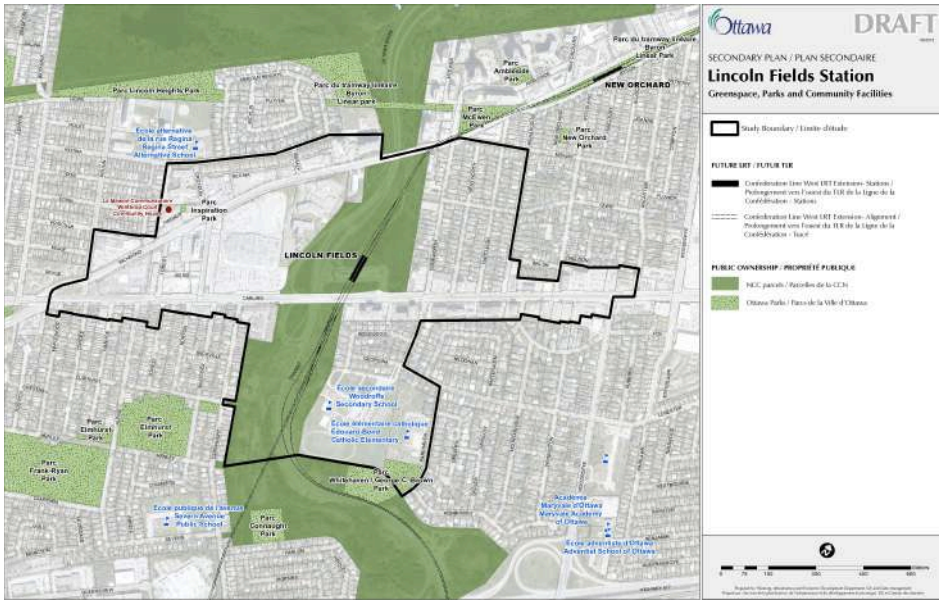

***Figure 5-1**: Proposed Lincoln Fields Station Secondary Plan study boundary. The LRT station lies within NCC land parcel (City of Ottawa, 2019)*

5.2 PROVINCIAL POLICY

All development in Ontario, including that at Lincoln Fields, must align with provincial planning priorities. These are expressed in the Provincial Policy Statement (2014) and include requirements for sustainable redevelopment, housing choice, active transportation, and protection of natural amenities. The project team also examined provincial guidelines that outline best practices in creating mobility hubs and TOD. Provincial policies provide guidelines and inspiration for the LFSA Plan.

5.3 MUNICIPAL POLICY

Municipal policies shape the vision and specific proposals of the LFSA Plan. These include visioning documents like the current and forthcoming City of Ottawa Official Plan. Other municipal documents regulate specific land use and built form requirements, such as the City of Ottawa Zoning By-law 2008-250 and Urban Design Guidelines for High-Rise Buildings (2018). Attention is also devoted to transportation planning and requirements expressed in the Transportation Master Plan (2013), City of Ottawa Cycling Plan (2013), and City of Ottawa Pedestrian Plan (2013). Finally, the project team established precedents and development targets through Transit-Oriented Development Plans (2014) already completed by the City of Ottawa. Municipal policies express broad support for street-oriented intensification along arterial road corridors and within redeveloped greyfields, influencing the vision and recommendations of the LFSA Plan.

Table 5-1: *Overview of federal, provincial, and municipal policy implications for the LFSA*

	Plan for Canadas Capital (2017)	*Capital Urban Lands Plan (2015)*	*Ottawa River South Shore (2018)*	*Parkways and Driveways Policy (1984)*	*Pathway Network (2006)*	*National Housing Strategy (2017)*	*Provincial Policy Statement (2014)*	*Transit Supportive Guidelines (2012)*	*Metrolinx Mobility Hub Guidelines (2011)*	*Official Plan (2003)*	*Official Plan (2019)*	*Zoning By-law 2008-250 (2008)*	*Transportation Master Plan (2013)*	*Cycling Plan (2013)*	*Pedestrian Plan (2013)*	*Urban Design Guidelines for High Rise Buildings (2018)*	*Urban Design Guidelines for Low Rise Infill Housing (2012)*	*Regional Road Corridors (2000)*	*Urban Design Guidelines for Development Along Arterial Mainstreets (2006)*	*TOD Guidelines (2007)*	*TOD Plans (2014)*	*10-Year Housing and Homelessness Plan (2013)*
	CANADA						**ONTARIO**			**CITY OF OTTAWA**												
*Promote **intensification** around transit stations*	X	X				X	X	X	X	X	X	X	X		X	X				X	X	X
*Encourage **intensification** along arterial corridors*	X	X					X	X		X	X	X	X			X	X	X	X	X	X	
*Enhance **safety** and **connectivity** of MUP networks*	X		X	X	X		X	X		X	X		X	X	X			X	X	X	X	
*Improve **public amenities** for local and regional connectivity, recreation, and climate change resiliency*	X	X	X	X	X		X			X	X		X	X	X						X	
*Redevelop built forms to provide a **variety of housing options***	X	X				X	X			X	X	X				X	X		X	X	X	X
*Orient buildings to the street to support a **human-scaled pedestrian environment***	X	X					X	X	X	X	X	X			X	X	X	X	X	X	X	
*Propose **diverse land uses** to enhance placemaking, public enjoyment, and economic development*	X	X					X	X		X	X	X				X		X	X	X	X	
*Plan for **easily accessible amenities** within walking distance of transit*	X	X					X	X	X	X	X		X	X	X	X	X	X	X	X	X	
*If required, locate parking **lots out-of-sight***								X	X	X	X		X	X	X	X		X	X			
Reduce parking space	X	X					X	X	X	X	X	X	X	X	X					X	X	
*Promote **infill** of underused parking lots to highlight the street edge along arterial main streets*								X	X	X		X			X	X	X	X	X			
Place high-rises at appropriate locations as landmarks that respect road ratios, vistas, and adjacent built form	X	X					X	X	X	X	X	X			X	X	X	X	X	X	X	
*Redesign arterial main streets as **complete streets with** midblock connections and active and public transportation priority*	X	X					X	X	X	X	X	X	X	X	X	X		X	X	X	X	
Provide generous sidewalks, multi-modal access, and bicycle parking that facilitates access to transit	X	X			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Consider opportunities for subsidized, social, or affordable community housing						X				X	X									X	X	X

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CHAPTER 6: SWOC ANALYSIS

This chapter discusses the strengths, weaknesses, opportunities, and challenges of the current LFSA site conditions. This analysis is based off a team site visit, stakeholder interviews, policy analysis, market analysis, and review of precedent studies. The SWOC analysis aids in the creation of a vision and plan for the LFSA.

Figure 6-2 summarizes the findings from the SWOC analysis of current conditions within the LFSA. This analysis is based off a team site visit, stakeholder interviews, policy analyses, market analyses, and review of precedent studies.

6.1 STRENGTHS

Several characteristics of the LFSA support potential TOD. The existing express bus connection has long provided connection to downtown Ottawa. Extension of the LRT and upgrades to the Lincoln Fields Station will improve sustainable mobility. Existing MUPs within the Sir John A. Macdonald Parkway Corridor provide active transportation and recreational opportunities. The corridor itself provides unique, scenic greenspace (**Figure 6-1**). Large ROWs along Carling Avenue and Richmond Road provide the opportunity for development of complete streets. Established surrounding neighbourhoods provide commercial, transit, and public space users. These neighbourhoods include schools within walking distance of the station. The LFSA offers significant greenspace.

Figure 6-1: *Informal desire lines within the Sir John A. Macdonald Parkway Corridor (SURP, 2019)*

6.2 WEAKNESSES

The current Lincoln Fields Bus Station is located within the Sir John A. Macdonald Parkway Corridor. This means the station is relatively far from adjacent occupied sites, that should have the greatest potential for redevelopment. Pedestrian access to the station is further hindered by limited crossing opportunities on arterial roads and the Parkway, noise pollution, and limitations of the built environment. Existing streets lack formal sidewalks and cycling infrastructure, retail such as the Lincoln Fields Shopping Centre is distressed, and most greenspace is inactive and uninviting. This lack of activity results in a general concern for public safety. Finally, existing roadways are frequently congested and irregularly oriented, leading to inefficient automobile travel patterns.

6.3 OPPORTUNITIES

Many weaknesses within the LFSA can be leveraged to achieve positive results. The large underutilized lands offer opportunities for infill development and intensification. The NCC South Shore Plan calls for significant investment and improvement to the Ottawa River shoreline, creating a high-quality recreation area adjoining the LFSA. Improved connectivity to downtown Ottawa will enhance residential and commercial desirability of the LFSA. RioCan REIT is taking advantage of the upcoming transit investment and has proposed interim redevelopment of the Lincoln Fields Shopping Centre. Forward-thinking policies will encourage and guide successful TOD.

6.4 CHALLENGES

The LFSA also features several challenges to TOD. The Parkway Corridor is designated NILM, meaning that development of Parkway land close to the future station is significantly constrained. Furthermore, large portions of the corridor are within a floodplain. Development in the LFSA is proceeding slower than comparable areas, suggesting a weaker local market. The City of Ottawa is currently experiencing an affordable housing shortage, and the LFSA Plan must address the challenge of providing affordable housing options. Desired MUP connections throughout the LFSA are currently difficult to traverse.

6.5 IMPLICATIONS FOR REDEVELOPMENT

Despite the weaknesses and challenges of this site, the LFSA offers significant opportunities for redevelopment. The SWOC analysis reinforces that the site is grossly underutilized; however, because of its size, readiness for redevelopment, and proximity to a future LRT transit station, has great potential. The LFSA Plan must capitalize on the future rapid transit investment at Lincoln Fields to realize the possibilities for redevelopment.

***Figure 6-2**: SWOC analysis*

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CHAPTER 7: PRECEDENTS

Precedent analysis informs principles that are proposed in the LFSA Plan. The project team examined approximately 70 precedents in four categories relevant to Lincoln Fields: greyfield redevelopment, mobility hubs, TOD, and creek renaturalization. This chapter highlights the resulting best practices developed from each category. Though some precedents have yet to reach build-out, all illustrate ideal conditions that can inform the LFSA Plan. Four detailed case studies from each category are presented in **Appendix E.**

7.1 Transit Oriented Development

TOD refers to compact, walkable, mixed-use communities connected to public transit (**Figure 7-1**). Land use mix and density contribute to the viability of mass transit. Therefore, TOD seeks to combine transportation and development to efficiently utilize land and bring communities closer to work and amenities (Transit-Oriented Development Institute, 2016).

Through reducing automobile dependence in communities, TOD encourages environmental sustainability, equity of access, and livability. TOD has become highly desirable in the real estate market by providing high-quality places where people can live, work, and play.

The principal goal of TOD is creating mixed-use, transit-supportive densities around transit stations so that more people can access high-quality transit, often within a 10-minute walk. This approach requires fine-grained urban design that complements pedestrian-oriented routes.

Figure 7-1: *Proposed transit-oriented development near the LFSA at Tunney's Pasture in Ottawa, ON (HOK, 2014)*

7.1.1 Relevance to the LFSA

To support public transit and encourage high-quality, sustainable community design, the LFSA Plan should adopt TOD best practices. The LFSA should become a transit-oriented community that favours sustainable transportation and efficient mixed-use development. Connections between development and the Lincoln Fields Station should be prioritized in the LFSA Plan.

7.1.2 Selected Precedents

This study examined 20 completed and proposed TODs to determine best planning practices for the LFSA. Four significant precedents are further outlined in **Appendix E.**

The following precedents were examined:

- **Gladstone: Ottawa, ON**
- **Brentwood: Burnaby, BC**
- **The Bridges: Calgary, AB**
- **Addison Circle: Addison, TX**
- Wellard: Perth, Australia
- Holland Cross: Ottawa, ON
- Hurdman: Ottawa ON
- Tunney's Pasture: Ottawa, ON
- Hayward: Hayward, CA
- Surrey Centre: Surrey, BC
- Joyce-Collingwood Village: Vancouver, BC
- Clarendon: Arlington, VA
- Subiaco: Perth, Australia
- Olympic Village: Vancouver, BC
- LeBreton Flats: Ottawa, ON
- Marine: Vancouver, BC
- Metropole: Ottawa, ON
- South Waterfront: Portland, OR
- Cornell: Markham, ON
- Anderson: Calgary, AB

7.1.3 Best Practices

Drawing from the precedents studied, the following best practices inform the LFSA Plan:

- **Ensure that the developed uses are transit-supportive:** Through creating dense, mixed-use development that supports public transit, trip times and distances will be reduced.
- **Mix uses vertically and horizontally:** Vertical mix means planning for different uses on different floors of a building, while horizontal mix requires different uses adjacent to each other. This provides for the diversity of people and amenities required for growth and community.
- **Discourage auto-oriented uses:** Automobile traffic increases congestion and decreases transit ridership, pedestrian safety, densities, environmental sustainability, and efficiency of development.
- **Ensure appropriate ground-level uses and design:** Uses that front the pedestrian realm including streets and parks should be designed to enhance the pedestrian experience, creating a livable environment.
- **Configure streets for connectivity:** Streets should be configured into smaller blocks with mid-block crossings to allow safer, more pleasant pedestrianism.
- **Provide diverse housing types:** Through different form and tenure, diverse housing options contribute to diversity of people. Affordable housing can create strong transit ridership through accommodating a community seeking affordable transportation options.
- **Design the public realm:** Balance should be achieved between human-scale buildings and high-density development around the station. Through designing parks and public spaces adjacent to the station, vibrant, livable, pedestrian-priority spaces are created.
- **Integrate with surrounding communities:** TOD should be phased to maintain constant connection between the redevelopment and surrounding community. Sensitive transitions in scale, form, and character help the existing community embrace the development.
- **Provide access to amenities during phased construction:** Important destinations that are essential to the community should remain in service and new amenities with large community benefit should be prioritized during construction.

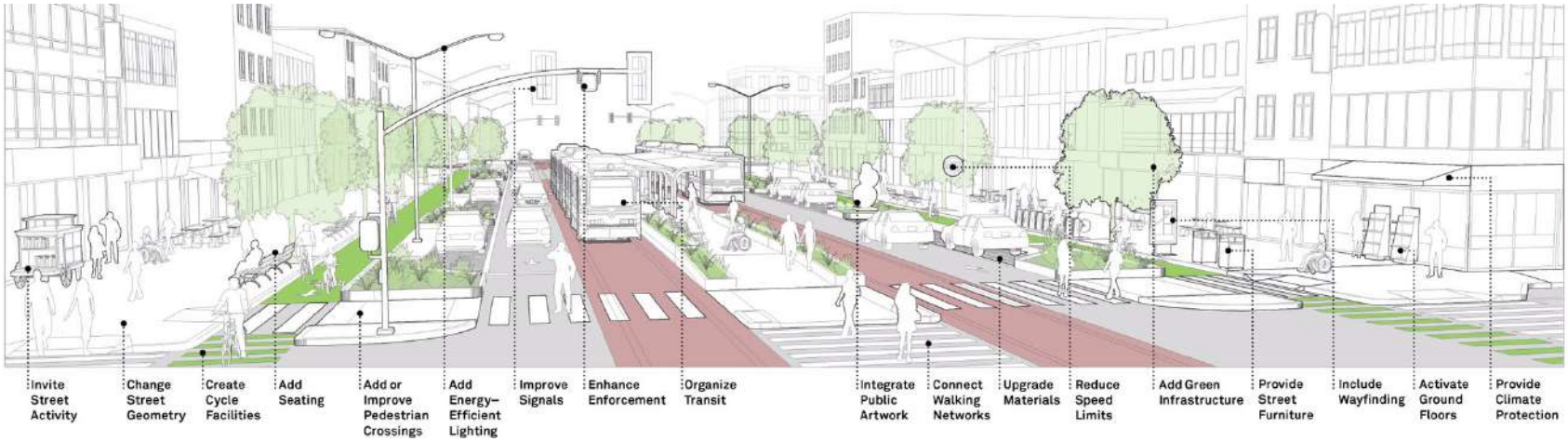

Figure 7-2: *Elements of a complete street within a transit-oriented development (National Association of City Transportation Officials, 2013)*

7.2 MOBILITY HUBS

Mobility hubs are transit stations that provide seamless connection between modes of transit, prioritizing active connectivity (Figure 6-3). Mobility hubs encourage higher-density development within an 800-metre walk radius around the station. Amenities that increase the convenience of transit are also provided.

As the primary interface for transit users, the design of transit stations has a significant impact on the overall travel experience. Therefore, the connection between the station and surrounding area must entice users with a comfortable, informed, and reliable means of transportation.

Successful mobility hubs are a centre of community activity, attracting people to live, work, shop, and play nearby. Mobility hubs improve quality of life, accessibility, environmental sustainability, and safety.

7.2.1 Relevance to the LFSA

To build community and improve quality of life within the LFSA, the future Lincoln Fields Station should adopt the characteristics and considerations of a successful mobility hub. As a future bus and LRT transfer point with bicycle and pedestrian access to the Ottawa River South Shore and greenspace corridor, the Lincoln Fields Station must emphasize seamless connection for these modes of transit with adjoining communities. Moreover, the future station is separated from redevelopment by undeveloped greenspace. Mobility hub best practices can help address this challenge for connectivity.

***Figure 7-3**: Cyclist entering bicycle parking station in Rotterdam Centraal Station (Bicycle Dutch, 2015)*

7.2.2 Selected Precedents

Though the term “mobility hub” is relatively recent, there are many examples of transit stations that prioritize seamless connection to a surrounding mixed-use environment. This study examined 20 different precedents that offer lessons for the LFSA. Four significant precedents are further detailed in **Appendix E.**

While many cases are found in downtown centres, the project team has found that the size and location of a station do not determine the quality of connectivity provided. Although the LFSA is more suburban than most cases examined, the new station and development should still feature high-quality mobility scaled to the LFSA context. In examining best practices for mobility hubs, the LFSA can address challenges of the station location through creative, innovative solutions.

The following precedents were examined:

- **Joyce-Collingwood Village: Vancouver, BC**
- **Millennium Park: Chicago, IL**
- **Union Station: Denver, CO**
- **Rotterdam Central Station: Rotterdam, The Netherlands**
- Kipling Station: Mississauga, ON
- Multi-Modal Transit Hub: Bremen, Germany
- Delft Station: Delft, The Netherlands
- Mockingbird Station: Dallas, TX
- Angel Lake Transit Station: Portland, OR
- Salesforce Transit Center: San Francisco, CA
- Oakridge Centre: Vancouver, BC
- Metrotown: Burnaby, BC
- Transbay Transit Centre: San Francisco, CA
- Surrey Centre: Surrey, BC
- Conestoga Mall: Waterloo, ON
- Pimisi Station: Ottawa, ON
- The Bridges: Calgary, AB
- Smart Centres: Vaughan, ON
- Fairway Station: Kitchener, ON
- Village de la Gare: Mont Saint-Hilaire, QC

7.2.3 Best Practices

Drawing from precedent study, the following best practices inform the LFSA Plan:

- **Design pedestrian pathways for safety:** This includes safe separation from traffic, appropriate pathway lighting and grading, and sheltering pathways from environmental elements.
- **Enhance wayfinding through design:** Station design should capitalize on lines of sight. Painting and colour can be used to direct travellers and increase sense of place. Technologies should be used to provide real-time transit system updates.
- **Provide diverse bicycle facilities:** Provide bicycle parking and consider additional solutions such as double-stacked bike racks to conserve space and end-of-trip facilities such as changerooms and lockers.
- **Integrate commercial activity:** Commercial uses increase the convenience of travellers and sense of place, encouraging increased safety and station use.
- **Achieve pedestrian connectivity through small blocks and mid-block connections:** Active transportation rates increase when pedestrian connection is prioritized. This means providing safe, direct, and comfortable routes to the station.
- **Consult with community groups:** Station design should consider the needs of existing and future demographics to maximize use and utility.
- **Provide accessible solutions to grade changes:** Gradual slopes, elevators, and escalators should be used to accommodate travellers, including those with limited mobility.
- **Engage in partnerships:** Mobility hubs rely on the development of transit-supportive densities in surrounding areas, often involving various landowners. Stakeholder interests must be considered in creating a comprehensive and successful hub.
- **Prioritize access to key destinations:** Phasing should ensure that high-priority destinations are accessible as soon as possible.
- **Integrate into the urban fabric:** Successful mobility hubs are woven into the community to improve user experience and utilize space efficiently.
- **Address the first- and last-mile problem of transit:** Different demographics will rely on different modes of transit to solve the first- and last-mile issue. Providing the most options possible for the final leg of a trip will reduce the barriers of sustainable transportation.
- **Encourage pedestrianism through public space integration:** Public spaces contribute to a pleasant environment and provide additional pathways for active transportation.

Figure 7-4: *Cross-section of the Salesforce Transit Centre, an ideal mobility hub in San Francisco, CA (WSP, 2019)*

7.3 GREYFIELD REDEVELOPMENT

Greyfield redevelopment means transforming underutilized, vacant urban land into vibrant, livable communities. As with Lincoln Fields, this often means redevelopment of distressed suburban malls. Most regional malls were built along arterial roads on vacant land considered unsuitable for residential use (Taichieva 2010). These areas were zoned for exclusive commercial use, and automobile transit to the mall was prioritized. Large enclosed malls came to dominate the landscape, surrounded by vastly over-scaled and underutilized parking lots.

Over the last two decades, the North American retail industry has experienced record closures, bankruptcies, and the death of hundreds of shopping malls (Dunham-Jones & Williamson, 2011). The per-capita retail space in Canada far exceeds other developed countries, suggesting that mall closure and distress will continue. The decline of large shopping malls provides an opportunity and impetus for suburban retrofit.

Retrofitting these greyfield sites integrates valuable land into the community fabric, and prioritizes mixed-use neighbourhoods, walkability, and placemaking in areas otherwise devoid of urbanism (**Figure 7-5**). Greyfield redevelopment acts as a catalyst to community revitalization.

Figure 7-5: *Before and after massing diagrams of the proposed plan for Tyson's Corner Mall in Virginia (Dunham-Jones & Williamson, 2011)*

7.3.1 Relevance to the LFSA

The City of Ottawa Official Plan (2003) places strategic focus on the "regeneration of greyfields and brownfields such as aging shopping centres and outdated industrial facilities." Large portions of the LFSA are underutilized greyfields, most notably the Lincoln Fields Shopping Centre site. Therefore, lessons from successful greyfield retrofits inform this LFSA Plan and can also contribute to the future City of Ottawa Secondary Plan.

7.3.2 Selected Precedents

This study examined 15 greyfield redevelopment precedents, focusing on sites that have been transformed from large regional shopping centres into thriving mixed-use developments. Successful greyfield redevelopment requires the introduction of high lot coverage, active street fronts, small walkable blocks, integration with modes of public transit, and high degrees of internal and external connectivity (Dunham-Jones & Williamson, 2011). Four case studies that reflect these outcomes are detailed in **Appendix E.**

The following precedents were examined:

- **Rockville Town Centre: Rockville, MD**
- **Belmar District: Lakefield, CO**
- **Mizner Park: Boca Raton, FL**
- **Shops at Don Mills: Toronto, ON**
- CityCenter: Englewood, CO
- Century Park: Edmonton, AB
- Mosaic District: Merrifield, VA
- Addison Circle: Dallas, TX
- Billings Bridge Centre: Ottawa, ON
- Westgate Shopping Centre: Ottawa, ON
- Elmvale Acres Shopping Centre: Ottawa, ON
- Legacy Town Centre: Dallas, TX
- Oakridge Mall: Vancouver, BC
- Bay Ridges Plaza: Pickering, ON
- Westbrook Village: Calgary, AB

7.3.3 Best Practices

Drawing from the precedents studied, the following best practices inform the LFSA Plan:

- **Encourage design and features that maximize environmental benefit:** This can include green building design, enforcing land-use mix that will result in internal trip capture, and prioritizing the existing and future transit network to support walkability and active lifestyles.
- **Create a compact district with a variety of building types, housing, and uses:** Encourage complementary uses, introduce mixed-use perimeter blocks, and plan for affordable and market-rate housing.
- **Design with the pedestrian in mind:** Create walkable, interconnected blocks that facilitate an enjoyable, efficient pedestrian experience.
- **Manage parking and encourage transit use:** Limit surface parking and locate residential parking sub-grade. Use buildings along the street edge to conceal parking structures and create consistent frontage.
- **Incorporate civic, institutional, and public uses and amenities to create sense of place:** Public space is crucial for establishing community and high design standards. When possible, repurpose existing buildings for civic use.
- **Adopt appropriate phasing:** Best practices show that successful projects begin initial development in areas closest to an existing or planned transit node, civic building, main street, or public space. Ensure preliminary phases of development are seen externally from the site to attract users.
- **Consider future connectivity and development:** If desired densities are not initially justifiable, surface parking should be designated and reserved for future development.
- **Foster a supportive relationship with the municipality:** Redevelopment projects require the confidence of public organizations and the community. Proactive engagement leads to more timely and successful outcomes (Falcone, 2002).
- **Utilize regulatory tools, public financing, and strategic public-private partnerships:** Incentivize, finance, and secure community benefits through density bonusing, up-zoning, expedited permitting, tax rebates, and fee waivers. Energy efficient retrofitting programs are becoming more important and useful for greyfield redevelopments.

***Figure 7-6** :Proposed greyfield redevelopment at Century Park in Edmonton, AB (ProCura, 2019).*

***Figure 7-7:** Successful greyfield redevelopment hosting community parks and central square at the Mosaic District in Merrifield, VA (Reed, 2016)*

7.4 CREEK RENATURALIZATION

Rivers and creeks in many urban and suburban areas have been artificially changed over time due to development pressure. Urbanization is widely recognized as one of the main causes of wetland alteration and drainage (Ravit et al., 2017). Construction paves over natural environments and creates impervious surfaces that increase the risk of flooding.

Creek renaturalization or "daylighting" involves the removal of streams from underground culverts and pipes, restoring their flow and path to past conditions (Smith, 2007). This relatively new practice is receiving considerable attention as policymakers and the public recognize the benefit that natural water systems provide to communities.

Healthy renaturalized creeks create unique public space, improve water quality, support a variety of wildlife, and provide flood protection to communities. Moreover, as the threat of climate change has become a more prominent concern for urban communities, renaturalization provides an opportunity to mitigate against some of its most adverse effects.

Figure 7-8: *Renaturalized creeks and wetlands provide open space, habitat, and floodplain attenuation in Mayesbrook Park, UK (Restore Project, 2013)*

7.4.1 Relevance to the LFSA

The Pinecrest Creek floodplain bisects the LFSA on the NCC Sir John A. Macdonald Parkway corridor. The proposed LRT alignment running through this corridor was altered to avoid interaction with the floodplain. Pinecrest Creek is contained within a culvert beneath the Parkway. The NCC has expressed interest in daylighting the creek and renaturalizing this space to better protect against flooding and provide additional recreational space for residents and visitors.

7.4.2 Selected Precedents

This precedent study examined 14 case studies. Three significant studies are further detailed in **Appendix E.** Case studies were chosen from suburban and urban locations where creeks were buried underground and have since been renaturalized due to concerns over flooding. Successfully restored rivers and creeks are created with meanders, runs, shoals, and gently sloping banks. Increased flood storage capacity is created through ponds and lakes, construction of wetlands, and generous riverfront planting. Renaturalized watercourses can also feature public amenities that improve riverfront access and provide recreational opportunities.

The following precedents were examined:

- **Quaggy River: London, United Kingdom**
- **Muddy River: Boston, MA**
- **Braid Burn: Edinburgh, United Kingdom**
- Rahway River: Rahway, NJ
- Mayes Brook: Dagenham, United Kingdom
- Penticton Creek: Penticton, BC
- Saw Mill River: Yonkers, NY
- River Alt: Liverpool, United Kingdom
- River Great Ouse: Milton Keynes, United Kingdom
- Cheonggyecheon River: Seoul, South Korea
- Isar River: Munich, Germany
- Don River: Toronto, ON
- Laojie River: Taoyuan City, Taiwan
- China Creek: Vancouver, BC

7.4.3 Best Practices

Drawing from the precedents studied, the following best practices are identified:

- **Create a rehabilitation master plan:** Plans should be developed to connect waterfront and recreation areas. Planning should occur at the watershed level and identify the most important sources of river degradation and opportunities for rehabilitation.
- **Utilize flood storage capacity of existing park land:** Provide additional flood storage capacity with ponds and lakes to increase biodiversity, rehabilitate habitats, and create attractive open space for public use.
- **Create a low flow meandering channel:** Retain culverts to absorb excess water in times of flooding. Replace brick and concrete with runs, shoals, and gently sloping banks. Introduce a variety of grasses, plants, and trees. Renaturalize creek banks.
- **Introduce a network of boardwalks, pathways and viewing points:** New infrastructure should be designed to provide full public access and can be submerged in times of flooding.
- **Creek restoration can be used as a tool to attract tourism and spark economic development:** New climate adaptation parks should be viewed as community focal points and prominent urban spaces. Encourage cultural, heritage and recreation opportunities.
- **Successful restoration programs involve innovative governance, inter-agency coordination and extensive public engagement:** A common vision should be shared among stakeholders that are involved with restoration plans. Activities should be well-coordinated. Roles and responsibilities should be clearly defined.

***Figure 7-9** :Floodplain storage of the Quaggy River in London, UK (CABE, 2011)*

7.5 IMPLICATIONS FOR REDEVELOPMENT

This precedent analysis examined approximately 70 case studies, identifying best practices for the redevelopment of Lincoln Fields. The LFSA Plan should incorporate best practices in greyfield redevelopment, mobility hubs, TOD, and creek renaturalization. Lessons from this precedent analysis will help transform and enhance the Lincoln Fields community.

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CHAPTER 8: DESIGN CHARRETTE

The project team team hosted a design charrette at Queen's University. Experts in urban design, transportation, and planning were invited to create a design vision for the LFSA. Design charrette participants included planners from the City of Ottawa, City of Kingston, Bray Heritage, and Fotenn Planning and Design, along with faculty and graduate students from the Queen's University School of Urban and Regional Planning. A list of participants and descriptions of charrette design concepts can be found in **Appendix F**.

Charrette participants were divided into four groups covering three focus areas. Two groups designed the Lincoln Fields Shopping Centre site with consideration to the surrounding environment, and two others examined the Carling Avenue and Richmond Road arterials. From amalgamating and considering these four designs, the project team developed inspiration, best practices, and recommendations that inform proposals of the LFSA Plan (**Figure 8-1, Figure 8-2**).

8.1 CHARRETTE PROCESS

Prior to the design session, the project team briefly presented background site information. Each group of charrette participants rotated through presentations on topics of relevance to the LFSA Plan: greyfield redevelopment, greenspace, TOD, and mobility hubs. The presentations provided participants with best practices identified through precedent analysis. Two members of the project team delivered each presentation, facilitated discussion, and addressed participant questions.

Finally, charrette participants were given one hour to complete a design for their portion of the LFSA (**Appendix F**). Having completed their designs, the four groups reconvened to present their vision and describe their learning.

8.2 IMPLICATIONS FOR REDEVELOPMENT

The project team benefited from the inspiration and insight of all charrette participants, and the LFSA Plan is significantly influenced by each design. This exercise helped the project team identify opportunities, challenges, and best practices to consider in redeveloping the LFSA. Due to the unanimous recommendation of charrette participants, the project team decided to daylight and renaturalize Pinecrest Creek, requiring further precedent analysis of this practice. Though each group produced unique recommendations and insight (**Table 8-1**), there were several important commonalities among each design:

- Create direct MUP connections from the Lincoln Fields Shopping Centre site across the Parkway Corridor to Lincoln Fields Station
- Daylight and renaturalize Pinecrest Creek
- Increase the density and permeability of redeveloped greyfields
- Create consistent, street-oriented development along important road corridors and arterials

This design charrette is the final analytical exercise that informs the LFSA Plan. Drawing from comprehensive analysis including the design charrette, the project team created two design concepts for the redevelopment of Lincoln Fields.

Figure 8-1: *Scaled model of a proposed design for the Lincoln Fields community (SURP, 2019)*

Figure 8-2: *Design charrette participants designing a new Lincoln Fields community (SURP, 2019)*

Table 8-1: *Summary of key design charrette recommendations*

FOCUS AREA	KEY RECOMMENDATIONS
LINCOLN FIELDS SHOPPING CENTRE GROUP 1	• Daylight and renaturalize Pinecrest Creek • Provide social housing along and within NCC greenspace • Develop high-density, mixed-use communities in the Shopping Centre greyfield • Create a natural MUP/park connection from the Shopping Centre to Lincoln Fields Station • Create a pedestrian colonnade from Lincoln Fields Station along Carling Avenue and into the Shopping Centre
LINCOLN FIELDS SHOPPING CENTRE GROUP 2	• Encourage high-density development on Carling Avenue to reflect the intensity of this arterial • Create stronger pedestrian connections from Lincoln Fields Station to the Shopping Centre and both arterials • Create active park space on the Shopping Centre site • Promote green infrastructure though naturalizing Pinecrest Creek • Develop commercial and office space along the site and residential use within the site
CARLING AVENUE	• Envision Carling Avenue as the gateway to the Parkway Corridor, featuring a grand entrance and scenic views • Consider removing the Parkway between Richmond Road and Carling Avenue • Remove the bus loop at Lincoln Fields Station • Place bus shelters along Carling Avenue • Design the frontage and glazing of mixed-use buildings along Carling Avenue to promote human-scale development • Improve MUP connections to Woodroffe Secondary School south of Carling Avenue • Increase density at the intersection of Richmond Road and Carling Avenue • Redefine the Carling Avenue median using bioswales • Create dedicated rush hour bus lanes along Carling Avenue
RICHMOND ROAD	• Daylight Pinecrest Creek and terminate the Parkway at a T-intersection on Richmond Road • Plan for open spaces before other land uses • Locate office towers as close to rapid transit as possible • Consider redeveloping the fire station and adjacent OCH-owned property into a mixed-use community centre with affordable housing • Create a traditional mainstreet on Richmond Road • Buildings along Richmond Road should be mid-rise with point towers located at key intersections

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CHAPTER 9: DESIGN CONCEPTS

Drawing from the project analysis, vision, and guiding principles, the LFSA Plan proposes two design concepts. Due to the unique development constraints of the LFSA, two redevelopment concepts are proposed to illustrate the mitigation and effect of these constraints.

As illustrated in **Table 9-1**, the major redevelopment constraints are the Sir John A. Macdonald Parkway, location of Metro and Rexall at the Shopping Centre site, and development on NILM. Concept 1 retains and mitigates these constraints, while Concept 2 envisions an LFSA where they no longer exist. Concept 1 illustrates how the LFSA can be best redeveloped under the existing constraints, and Concept 2 reveals how removal of these constraints will result in the optimal redevelopment of Lincoln Fields.

Table 9-1: *Concept 1 and 2 illustrate the impact of three constraints in the LFSA*

CONSTRAINT	CONCEPT 1	CONCEPT 2
THE SIR JOHN A. MACDONALD PARKWAY	Parkway is retained but reduced to two lanes terminating at Carling Avenue	Parkway is removed between Richmond Road and Carling Avenue
LOCATION OF METRO AND REXALL	Location of Metro and Rexall is unchanged from the submitted site plan	Location of Metro and Rexall is flexible
DEVELOPMENT ON NCC NILM LANDS	No redevelopment occurs on NILM beyond widening Carling Avenue with low-rise commercial	Minor redevelopment occurs on NILM with significant densification on the widened Carling Avenue

The treatment of these constraints means Concept 1 and 2 offer different proposals for the Sir John A. Macdonald Parkway and redeveloped greyfields. Both concepts share the same guiding vision and principles developed through analysis, and therefore share many similar characteristics. In areas unaffected by the constraints, both concepts propose the same development.

Ultimately, both concepts result in vibrant, compact TOD at Lincoln Fields that reflects the vision and analysis. **Table 9-2** compares each concept to the existing conditions and targets derived from prior City of Ottawa TOD studies. The following chapter will present and explain both concepts.

Table 9-2: *Key development characteristics of the existing conditions, Concept 1, Concept 2, and redevelopment targets*

	EXISTING	CONCEPT 1	CONCEPT 2	TARGET
GROSS DENSITY	70	345	373	350
GROSS FSI	0.85	2.86	2.64	2.00
DWELLING UNITS	797	8,617	8,946	8,503
DWELLING UNITS PER HECTARE	15	165	171	163
RESIDENTS	6,509	15,579	16,058	15,257
JOBS	3,288	2,364	3,327	3,814
RESIDENTS/JOBS	1.9	6.6	5.2	4.0
MAXIMUM HEIGHT	21 storeys	26 storeys	26 storeys	26 storeys
PARKING	7,461	5,266	4,786	5,461
SITE AREA (HA)	140	52	52	52
PARKS (HA)	0.92	3.8	3.2	3.5
PARKS INCL. PARKWAY (HA)	14.9	17.8	17.2	17.5

9.1 LRT INFRASTRUCTURE

The track alignment and location of the Lincoln Fields LRT, as proposed by OC Transpo, remains constant in both design concepts.

The LRT will emerge from an underground covered trench immediately south of Richmond Road and continue along the Parkway Corridor to Lincoln Fields Station. South of the station, the alignment splits at Pinecrest Junction. One branch terminates south at Baseline Station, and the other branch continues east towards Queensview Station and terminates at Moodie Station.

The Pinecrest Junction can be seen in **Figure 9-1**, while a rendering of the split track alignment is shown in **Figure 9-2**.

Figure 9-1: *LRT track alignment at Pinecrest Junction (City of Ottawa, 2017)*

Figure 9-2: *Rendering of track at Pinecrest Junction looking south (City of Ottawa, 2016)*

9.2 THE SIR JOHN A. MACDONALD PARKWAY CORRIDOR

The NCC-owned Sir John A. Macdonald Parkway was constructed in 1961 to provide scenic entry into central Ottawa for the enjoyment of all Canadians. In keeping with mid-century planning principles, the Parkway was built primarily for automobiles. The four automobile lanes are contained within a pastoral landscape that features manufactured river views. During development of the Parkway in the LFSA, Pinecrest Creek was buried in an underground culvert. MUPs and greenspace currently provide opportunities for active and passive recreation.

The Parkway Corridor has served as a ceremonial entrance to Ottawa and recreational space for LFSA residents. With the impending introduction of the LRT, the LFSA should experience intensification and TOD. Changes to accommodate LRT are planned, including the removal of BRT lanes south of Carling Avenue and addition of at-grade LRT tracks south of Richmond Road. Given intensification of the LFSA and infrastructure evolution, the LFSA Plan reconsiders the best future use and allocation of space within the Parkway Corridor, while respecting the NCC vision for this important element of NILM.

Figure 9-3: *The Parkway features an extensive MUP network, emphasis on vehicle traffic, and overabundance of passive recreation space (SURP, 2019)*

As currently planned, the Parkway Corridor will see retention of automobile infrastructure and addition of at-grade LRT bisecting the space. This will diminish the experience of users and reduce opportunities for active transportation across the corridor. Current plans for the Parkway appear to reflect the varied interests of multiple transportation agencies rather than a cohesive vision. The unique legacy and intent of the Parkway could be diminished through piecemeal action.

Bearing this in mind, the Parkway Corridor requires comprehensive consideration. Through studying the corridor, the team identified that current and planned infrastructure will not best reflect the legacy and intent of this unique space. Therefore, Concept 1 and 2 feature proposals that enhance the Parkway in alignment NCC vision, which is to provide efficient mobility, a scenic experience, passive and active recreation, and ecological services. The difference between the Parkway alignment within the two design concepts is illustrated in **Figure 9-4**.

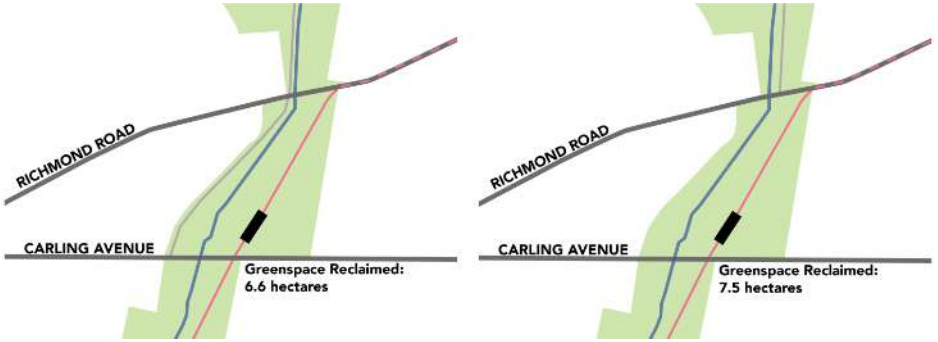


Figure 9-4: *The Parkway greenspace plan for Concept 1 (left) and Concept 2 (right)*

9.3.1 Concept 1: Parkway Corridor Plan

To improve the quality and amount of greenspace, Concept 1 proposes reduction of the Sir John A. Macdonald Parkway from four to two vehicle lanes at Woodroffe Avenue. The ramps at Carling Avenue will be replaced with a T-intersection more suitable for desired traffic speed and volume. This liberates 6.6 hectares of recreational space and allows daylighting Pinecrest Creek, enhancing ecological services. The naturalized creek and new MUP network will improve recreational and active transit experience. Additionally, the large bus loop at Lincoln Fields Station is removed and replaced through road networks in redeveloped greyfields. Through these alterations, Concept 1 creates space for significant improvement of the corridor while retaining the road connection to Carling Avenue.

9.3.2 Concept 2: Parkway Corridor Plan

Concept 2 presents a less-constrained vision for the corridor, as illustrated in **Figure 9-5**. The Parkway vehicle lanes are removed between Carling Avenue and Richmond Road, where the Parkway terminates at a new T-intersection. Concept 2 also reduces the Parkway to two lanes between Richmond Road and Woodroffe Avenue.

The removal of all vehicular lanes reclaims 7.5 hectares of greenspace. As with Concept 1, the existing and planned bus loop at Lincoln Fields Station is replaced through street connections in the redeveloped LFSA. Eliminating the vehicular lanes reduces pollution and physical barriers, significantly improving the corridor for recreation, active transportation, and ecological services. Additional space increasing the prominence of the daylighted Pinecrest Creek, facilitating increased riparian area, ecological function, natural habitat, environmental resiliency, and opportunities for MUP users to interact with the creek.

Concept 2 also proposes redevelopment on Parkway NILM. This limited development serves the public interest through insulating the new park space from noise on Carling Avenue, intensifying the LFSA as a gateway to the Ottawa River South Shore Riverfront Park, and improving the success of active and public transit in the corridor.

Figure 9-5: *Rendering of the Concept 2 Parkway plan, including connections to the Ottawa River and surrounding area.*

9.3.3 Connecting to the South Shore and Beyond

The LFSA Plan also considers integration of the Parkway Corridor and Ottawa River South Shore. Through the Ottawa River South Shore Riverfront Park Plan (2018), the NCC is improving pedestrian and cyclist safety and connectivity, increasing public facilities, enhancing water access, and providing habitat along the riverfront from central Ottawa to the LFSA. Lincoln Fields is mentioned as the gateway to the western edge of this ambitious plan, as seen in **Figure 9-6**. Connecting greenspace within the LFSA to the South Shore will create a truly regional greenspace network for the benefit of recreational and active transit users. Improved connectivity will facilitate active transit from the LFSA to central Ottawa via MUPs.

Figure 9-6: *The LFSA adjoins with the western edge of the Ottawa River South (NCC, 2018)*

9.4 BUILT ENVIRONMENT

Proposed redevelopment in the LFSA promotes human-scale, street-oriented intensification of the built environment. To sustain activity and future residents, Concept 1 and 2 feature mixed-use development along important existing and proposed corridors. Both concepts propose and achieve a dense, interconnected built environment (**Figure 9-7**).

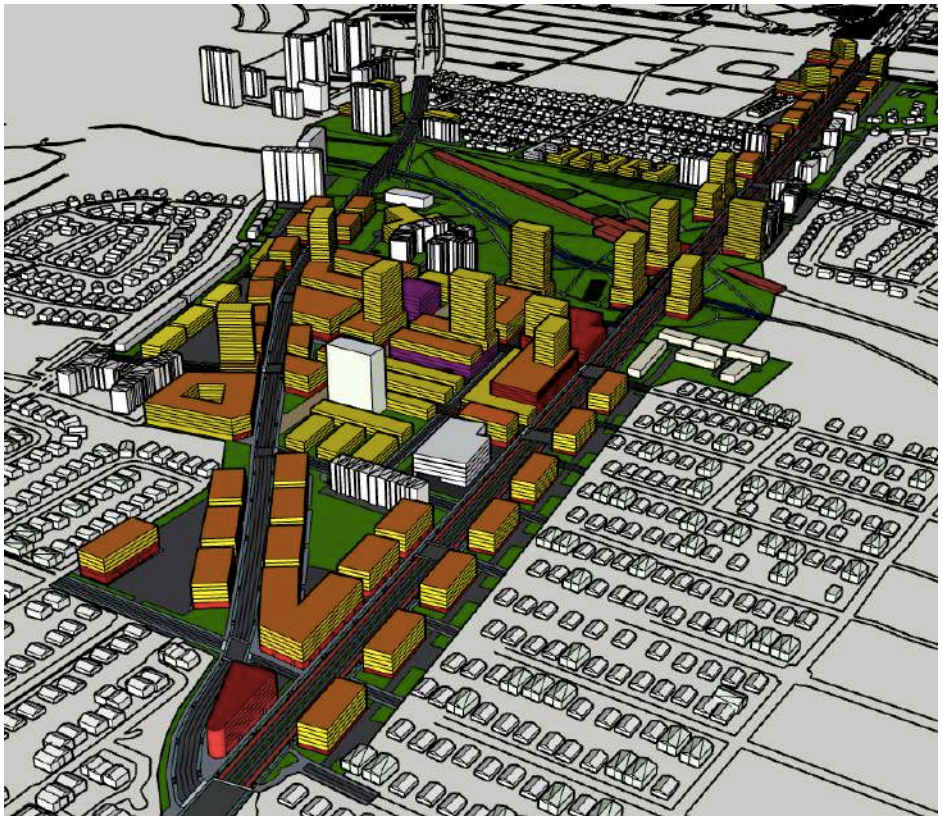


Figure 9-7: *Eastbound view along arterial corridors in Concept 2*

Building height and massing are designed for minimal shadowing impact, and high-rise buildings feature a minimum three-metre stepback from the podium edge to maintain human scale. High-rise development ranges from 12 to 26 storeys (**Figure 9-8**, **Appendix G & Appendix H)**

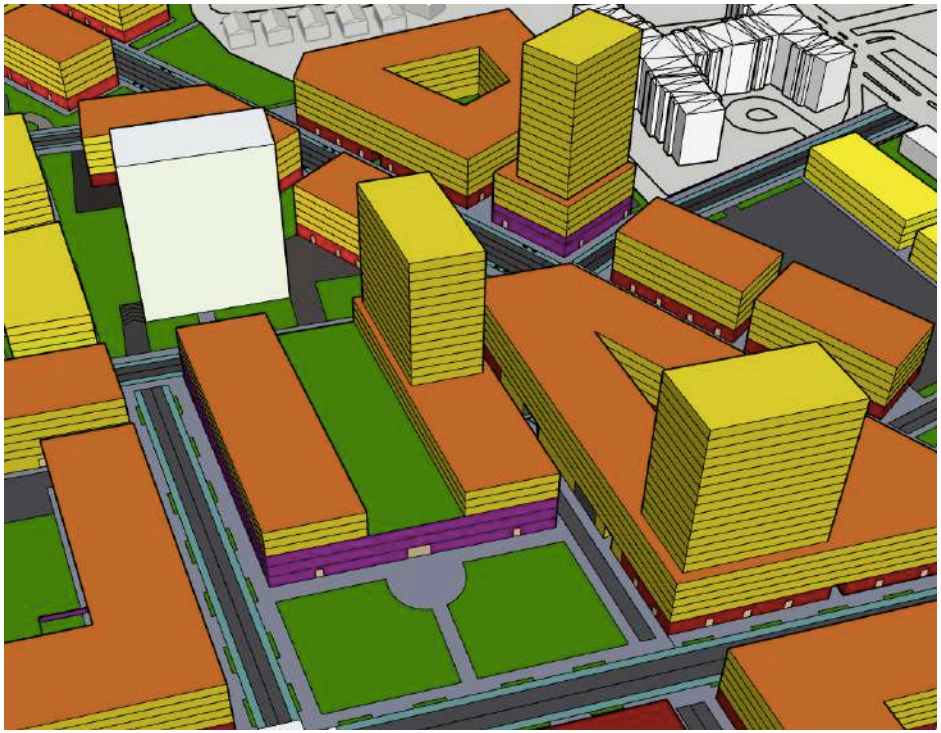


Figure 9-8: *High-rise development is proposed for important corners and arterials in both design concepts*

The built environment features two elements: redevelopment along Carling Avenue and Richmond Road and redevelopment between the two arterials.

The Carling Avenue and Richmond Road corridors are lined with mixed-use, street-oriented buildings that create consistent, active frontage. The significant intersection of Richmond Road and Carling Avenue is defined by a flatiron building, creating a landmark entrance to the LFSA (**Figure 9-9**). This building creates view corridors along both arterials. Development along the street edge is mixed-use, featuring one storey of commercial retail and up to five storeys of residential dwellings or office space for a total height of six storeys. Mixed-use redevelopment contributes to a safe, livable, active environment. Richmond Road includes two sites identified for high-density affordable housing: a fire station north of the LFSA and three City-owned properties west of the Sir John A. Macdonald Parkway.

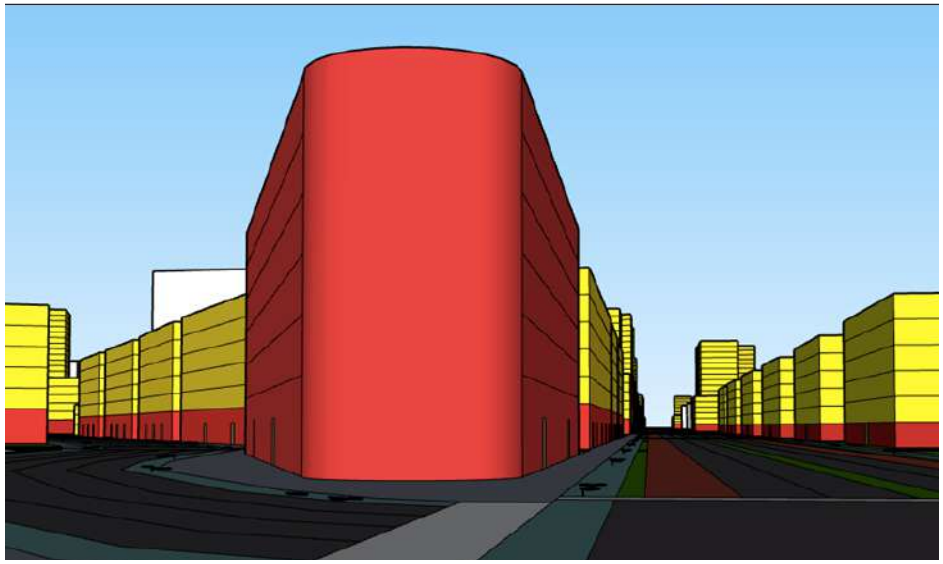


Figure 9-9: *The landmark flatiron proposed in both design concepts frames the view corridors down Richmond Road and Carling Avenue and enhances a sense of place, as with this flatiron in Seattle (Hewitt, 2019)*

Carling Avenue features unique development designed to connect the future Lincoln Fields Station with areas of intense redevelopment. The bridge on Carling Avenue that spans the Parkway Corridor is widened by 15 metres and transformed into a covered colonnade with commercial retail along the street edge (**Figure 9-11**, **Figure 9-10**). The covered colonnade provides pedestrian access along this section of Carling Avenue and into intensified areas. This development will provide safe, active access to the future LRT Station along Carling Avenue.

Generally, redevelopment along arterials is common between both design concepts. However, the proposals for greyfield redevelopment vary due to the unique constraints that influence Concept 1 and are transcended in Concept 2.

Figure 9-10: *Street-level view of the 1-670 Cap pedestrian colonnade in Columbus, OH (Meleca, 2004)*

Figure 9-11: *The I-670 Cap in Columbus - a pedestrian colonnade- is a design precedent for the Carling Avenue overpass (Google Earth, 2019)*

9.4.1 Concept 1: Built Environment

Concept 1 proposes street-oriented infill along new grids created within redeveloped greyfields, proposing large perimeter blocks that balance greenspace and densification (**Figure 9-12**). The core of these perimeter blocks is intended for private amenities. A community centre is proposed, fronting a public plaza adjoining the central axis. The location of Metro is retained and Rexall is embedded within mixed-use development along Carling Avenue. Residential towers flank the site along Carling Avenue, Richmond Road, and the Parkway. Concept 1 integrates the Lincoln Fields Station with areas of intensification.

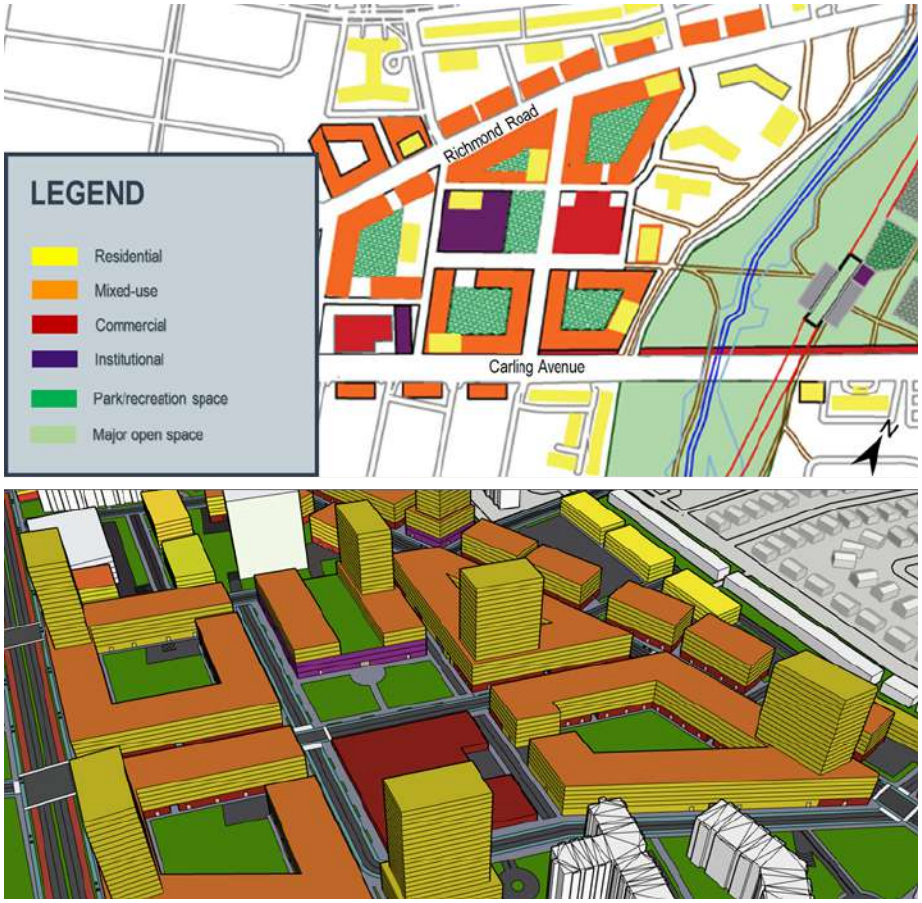


Figure 9-12: *Concept 1 promotes mixed-use perimeter blocks to balance density, greenspace, and activity in redeveloped greyfields*

9.4.2 Concept 2: Built Environment

Concept 2 promotes a permeable street grid. Diverse building types are proposed while achieving transit-supportive densities, and street-oriented buildings feature ground-floor retail to activate the pedestrian experience (**Figure 9-13**). Metro and Rexall are located along Carling Avenue to maximize flexibility of the redeveloped Shopping Centre. Concept 2 also proposes a central community centre and library overlooking a public park. Since the Parkway is removed and greenspace is reclaimed, Concept 2 proposes three high-rise buildings above the pedestrian colonnade, featuring denser development closer to the Lincoln Fields Station.

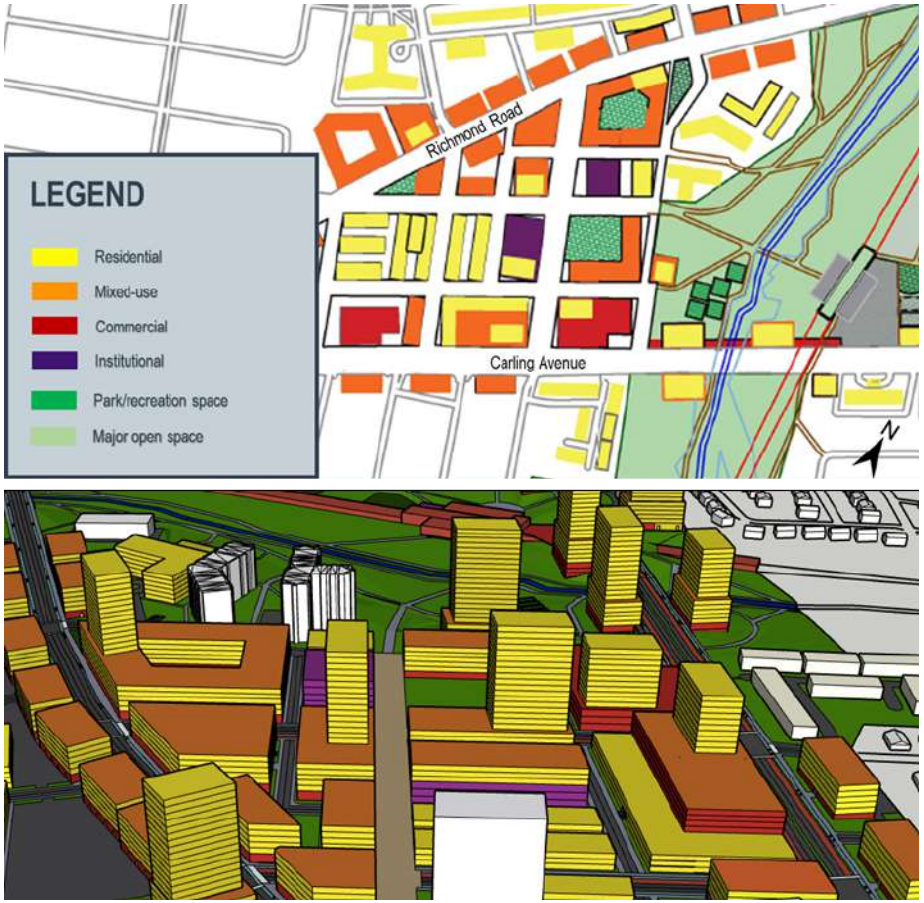


Figure 9-13: *By proposing development on NILM, Concept 2 can achieve higher densities near the station and more diverse forms of housing in greyfields*

9.5 RIGHTS OF WAY

Connections throughout the LFSA and to the Lincoln Fields Station are prioritzed in Concept 1 and 2. Given constraints on development due to NILM, connections must be created from areas of intensification to support TOD. Connectivity plans for each concept examine pedestrian, cycling, vehicular, and public transit circulation. Richmond Road and Carling Avenue are transformed into complete streets, promoting modal balance along with more efficient, enjoyable transit.

Through reducing Carling Avenue from six vehicle lanes to four plus two bus-priority lanes, a complete street is created across the entire corridor (**Figure 9-14**). Wide sidewalks and separated cycle tracks promote active transit. Richmond Road is also transformed into a complete street with four traffic lanes, sidewalks, and cycle tracks (**Figure 9-15**). These complete streets enhance modal share and facilitate safe, efficient transportation throughout the LFSA.

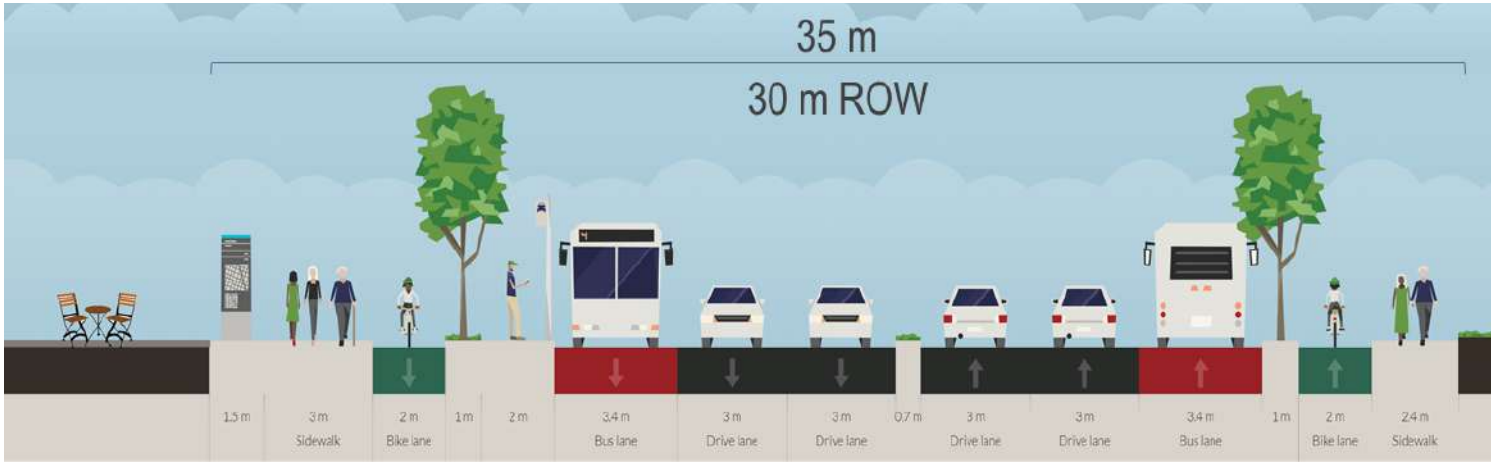


Figure 9-14: *Cross-section of Carling Avenue at the Lincoln Fields Station*

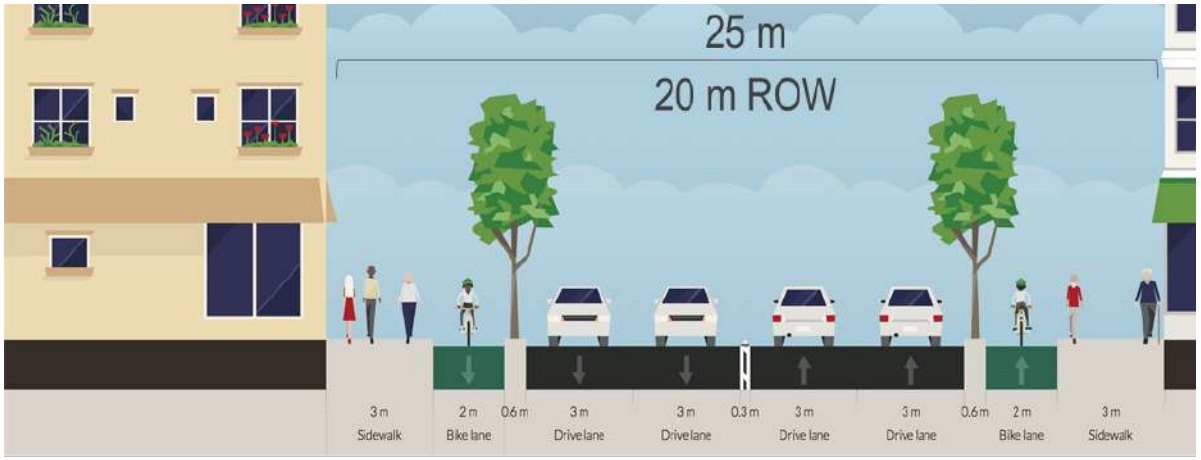


Figure 9-15: *Cross-section of Richmond Road*

9.6 PEDESTRIAN CONNECTIVITY

Improved pedestrian experience is prioritized in both concepts, as illustrated by the hierarchy of users in **Figure 9-16**.

Figure 9-16: *Hierarchy of users considered when creating LFSA design concepts (Global Designing Cities Initiative, 2016)*

Pedestrian connection throughout the LFSA is improved through introducing complete streets and expanded MUPs that connect to Lincoln Fields Station and the Ottawa River. Sidewalks are expanded along Richmond Road and Carling Avenue and applied to new roads within redevelopment sites. The proposed built environment creates a consistent street edge with permeable blocks to enhance the pedestrian experience.

MUPs are carefully designed to provide direct access to all important locations in the LFSA. Placed just outside the floodplain surrounding the daylighted Pinecrest Creek, the paths offer accessible recreational trails for all users. These paths can provide year-round recreation for residents and vistors to the LFSA. MUPs will use painted lines delineating space for different users to reduce modal conflict.

Pedestrian access is also facilitated in both concepts through the covered colonnade along Carling Avenue (**Figure 9-17**). The ideal pedestrian experience of the proposed colonnade is a consistent retail street where pedestrians are unaware they are on a bridge, as shown in **Figure 9-17**. Numerous proposed controlled intersections will ensure a safer, more efficient pedestrian experience.

Figure 9-17: *Street-level view of the 1-670 Cap pedestrian colonnade in Columbus, OH (Meleca, 2004)*

9.6.1 Concept 1: Pedestrian Connectivity

To improve access from intensification at the Lincoln Fields Shopping Centre to Lincoln Fields Station, a direct MUP crosses the Parkway and Pinecrest Creek. As with Concept 2, Concept 1 widens Carling Avenue to feature a covered colonnade that will provide active, all-weather access to the Station. Concept 1's pedestrian connectivity plan is illustrated in **Figure 9-20**.

9.6.2 Concept 2: Pedestrian Connectivity

Due to removing the Parkway, Concept 2 proposes a pedestrian boulevard running east-west through the LFSA to provide direct, uninterrupted pedestrian access from Forest Street in the west to Lincoln Fields Station in the east. The pedestrian boulevard calms traffic by intersecting the proposed central ROW at curb level, causing drivers to experience a speed table (**Figure 9-18**).

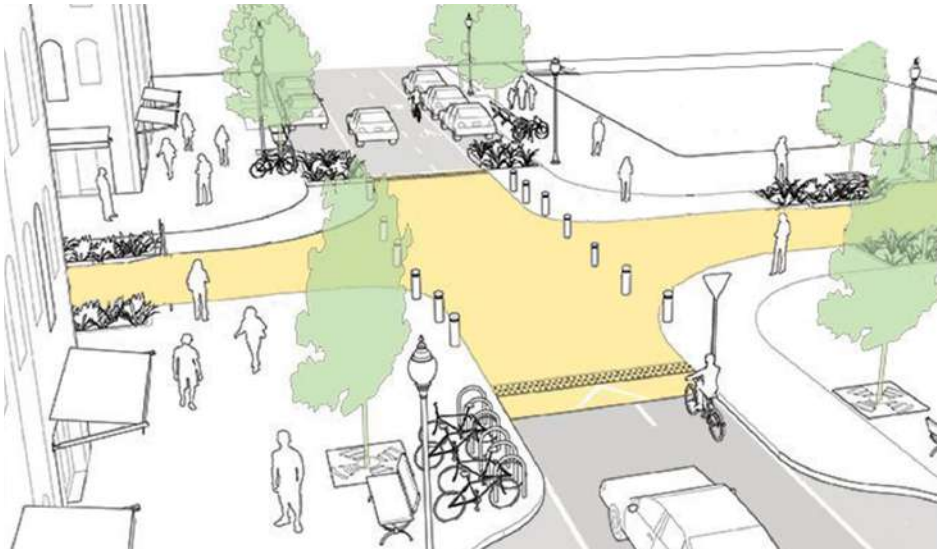


Figure 9-18: *A speed table, as proposed in Concept 2 (adapted from NACTO, 2013)*

The pedestrian boulevard will host small-scale, ground-floor retail. Residential density and community spaces fronting the boulevard will ensure this space is active and vibrant. The curb-level street also allows better access to adjoining storefronts. A rendering of this concept is shown in **Figure 9-19**.

Concept 2 also proposes development on NILM along Carling Avenue to activate the street, maintain consistent street edge, and increase intensification near the station. Taller buildings are proposed along the colonnade to increase intensification. Concept 2's pedestrian connectivity plan is illustrated in **Figure 9-21**.

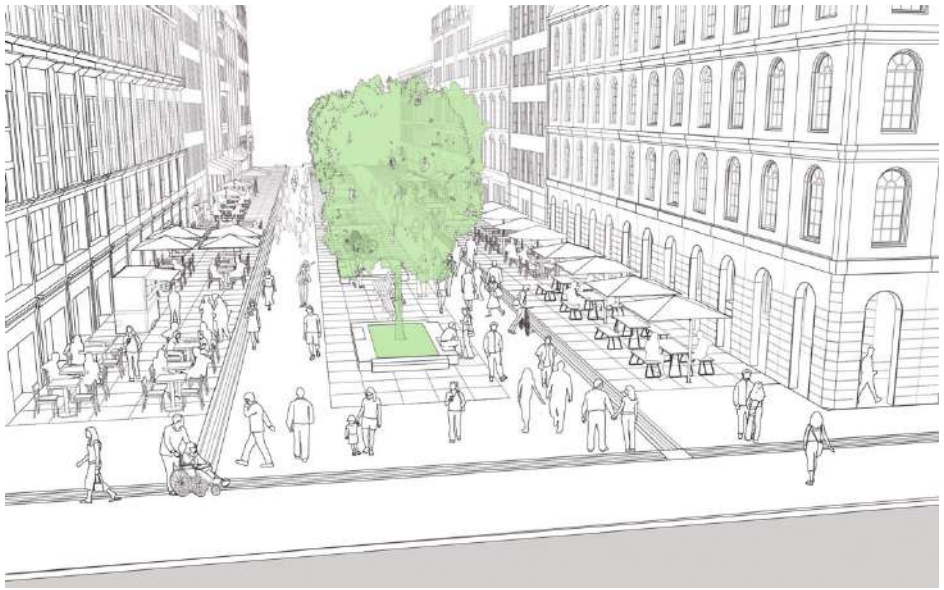
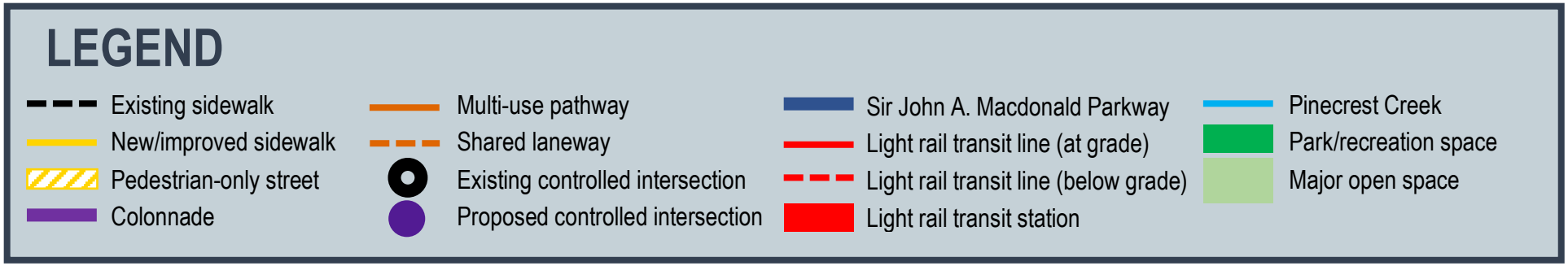


Figure 9-19: *Rendering of pedestrian-only boulevard (NACTO, 2013)*

Rendering of proposed MUPs can be seen in **Figure 9-22** and **Figure 9-23**.



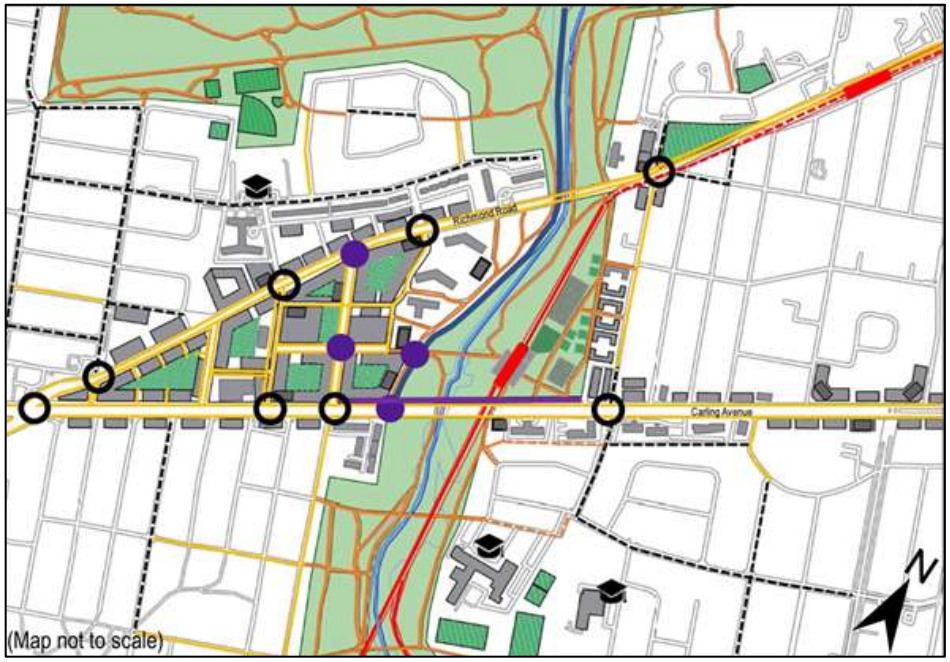


Figure 9-20: *Concept 1 pedestrian plan*

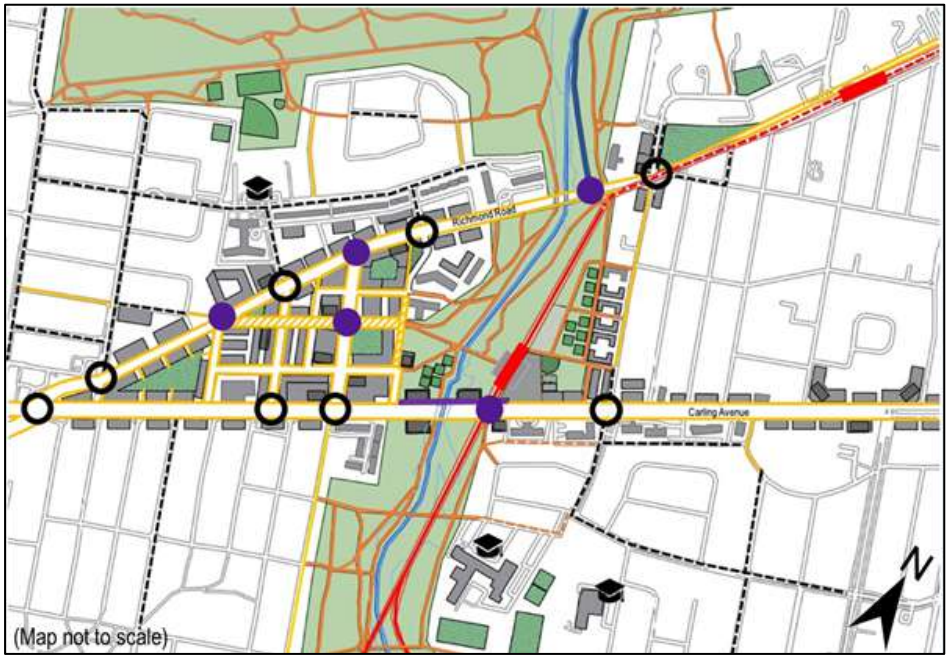


Figure 9-21: *Concept 2 pedestrian plan*

Figure 9-22: *Southbound view from Richmond Road at connecting MUP network within the Sir John A. Macdonald Parkway Corridor (City of Ottawa, 2017)*

Figure 9-23: *Northbound view of a MUP running along the eastern side of the LRT tracks (City of Ottawa, 2017)*

9.7 CYCLING CONNECTIVITY

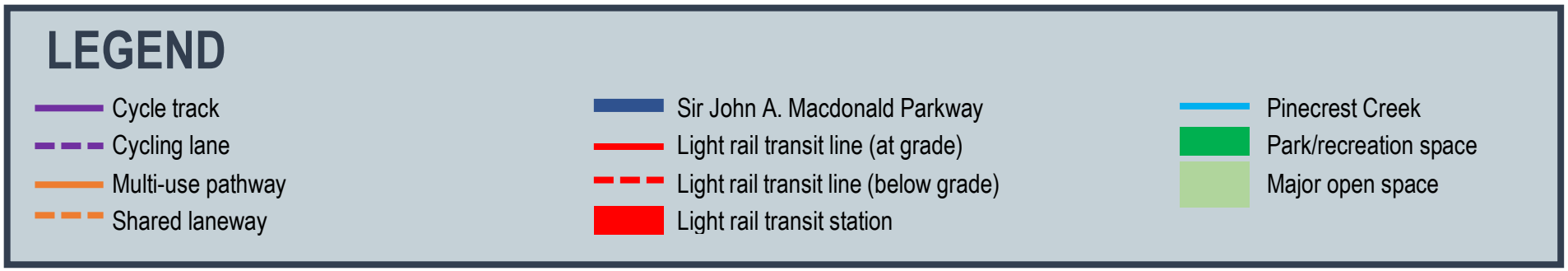
To further support and improve active transportation, dedicated cycling infrastructure is expanded along Richmond Road and introduced to Carling Avenue and other key corridors in redeveloped greyfield sites. (**Figure 9-24**, **Figure 9-25**). Cycling is also facilitated via MUPs throughout the Parkway Corridor, connecting to the Lincoln Fields Station and riverfront. Painted lanes divide cycling from pedestrian travel along these MUPs, reducing modal conflict.

Figure 9-24: *Rendering of cycle tracks to be implemented within the LFSA (NACTO, 2011)*

Grade-separated cycle tracks (**Figure 9-24**) reduce risk and stress for cyclists along roads with higher speeds, and are therefore proposed along the most heavily trafficked roads in each design concept. Special consideration has been given to the design of these cycle tracks to reduce conflict with vehicles, transit buses, and pedestrians. Cycle tracks can be diverted around the proposed bus stop at Lincoln Fields Station to further eliminate modal conflict (**Figure 9-25**).

Figure 9-25: *Cycling lanes can be diverted around transit islands (NACTO, 2016)*

The cycling connectivity plans for Concept 1 and Concept 2 are illustrated in **Figure 9-26** and **Figure 9-27**, respectively.



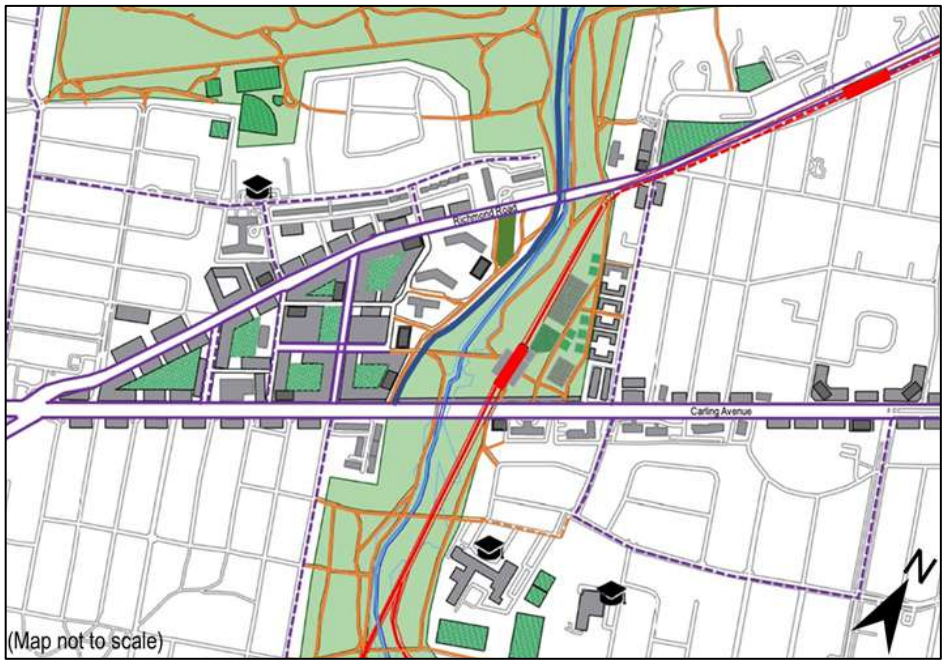


Figure 9-26: *Concept 1 cycling plan*

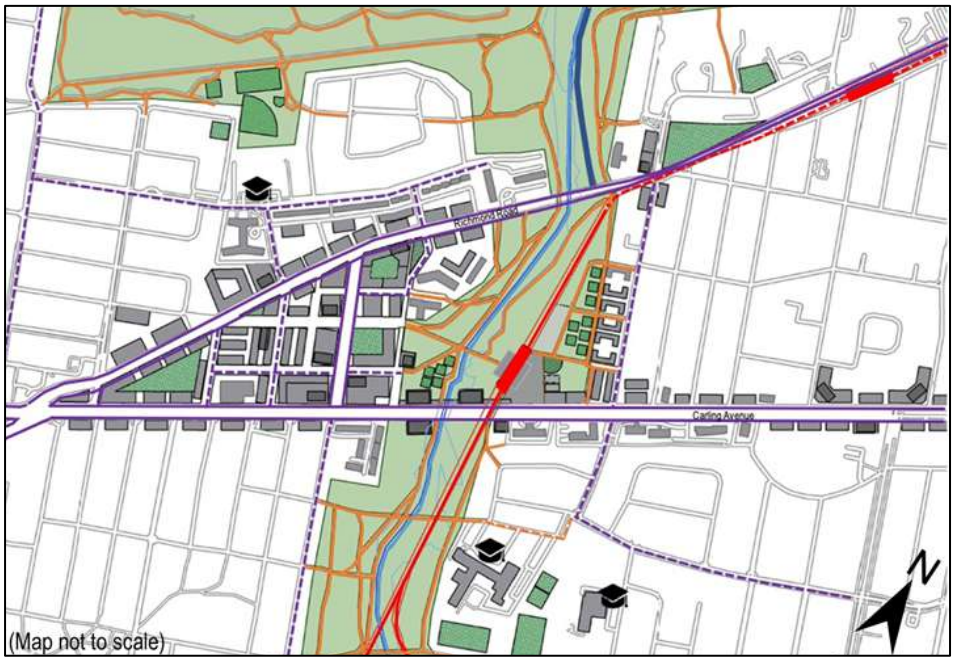


Figure 9-27*: Concept 2 cycling plan*

9.8 PUBLIC TRANSIT CONNECTIVITY

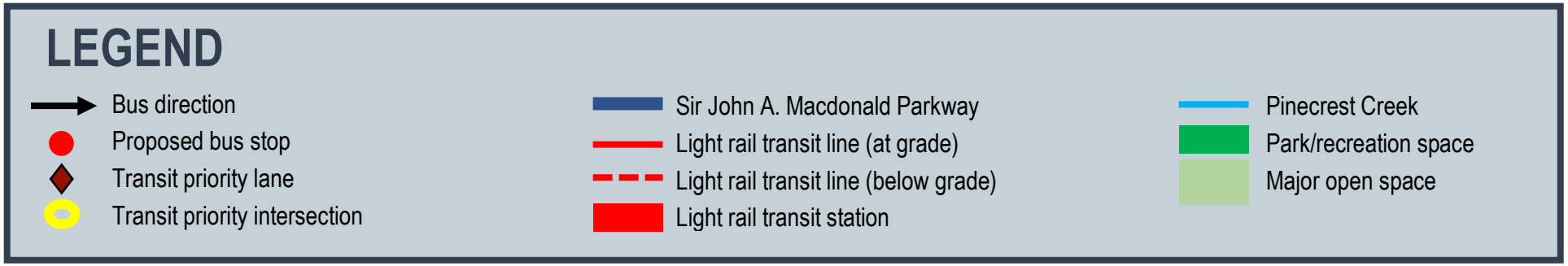
Redevelopment in the LFSA is focused on the Lincoln Fields LRT Station and prioritizes a convenient, efficient bus network providing access to the station and surrounding neighbourhoods (**Figure 9-29**, **Figure 9-30**). Carling Avenue is designated a transit-priority corridor with dedicated bus lanes to facilitate efficient bus transit. Carefully planned stops along Carling Avenue provide access to the Station. Bus routes, stops, and connections also permeate redeveloped greyfields, including the Lincoln Fields Shopping Centre. Bus stops directly adjoin community centres and Metro, providing convenient access to these important services.

Figure 9-28: *The large bus loop proposed at the Lincoln Field Station should be removed and replaced within redeveloped street grids (City of Ottawa, 2018)*

To create additional active and renaturalized greenspace, the large proposed Lincoln Fields Station bus loop is removed (**Figure 9-28**) and replaced through a redeveloped street grid on the Lincoln Fields Shopping Centre site. The grid allows for buses to complete a circuit, removing the need for a dedicated loop and increasing access to community amenities. Removal of the bus loop also allows for more efficient transit mobility, as buses are not required to merge in or out of traffic. The method of bus routing differs slightly between each concept.

Concept 1 does not include dedicated bus lanes within the proposed redevelopment street network. However, buses seeking to turn onto Carling Avenue can make a right turn on Croydon Avenue, another right around the community centre to stop at Metro, and then continue south before reaching a transit-priority controlled intersection.The public transit connectivity plan is illustrated in **Figure 9-29**.

Concept 2 places a stop adjoining Metro on Carling Avenue. Buses then turn right on Croydon Avenue, right on Richmond Road, then right onto the central internal street to stop in front of the community centre before continuing south to reach a transit-priority controlled intersection.The public transit connectivity plan for Concept 2 is illustrated in **Figure 9-30**.



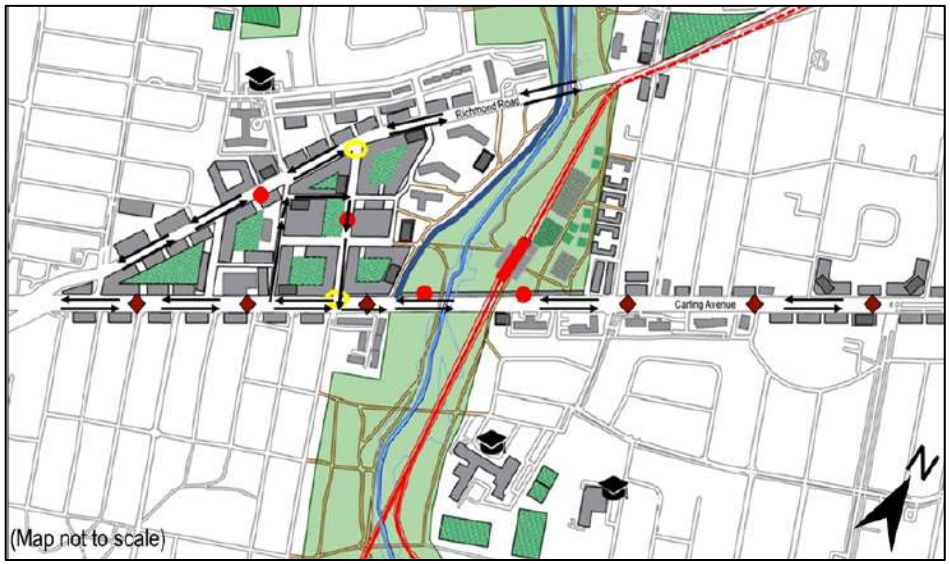


Figure 9-29: *Concept 1 transit connectivity plan*

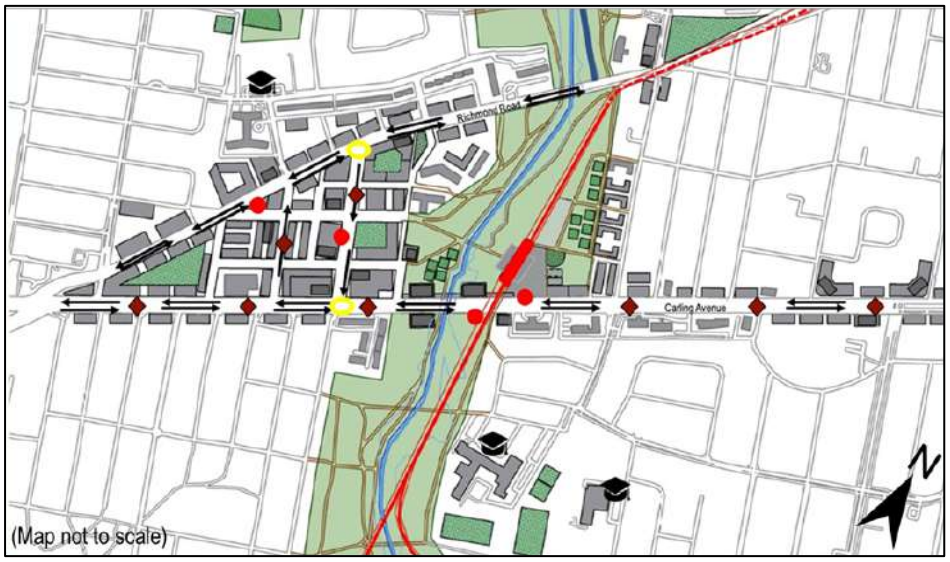


Figure 9-30: *Concept 2 transit connectivity plan*

9.9 VEHICLE CONNECTIVITY

Though automobile lanes and capacity are reduced along Carling Avenue and Richmond Road, efficient vehicular connections remain important for the LFSA. The vehicular network is designed to facilitate efficient traffic flow while ensuring that active and public transit users can safely and efficiently enjoy the ROW. Carling Avenue and Richmond Road remain important arterials, and new street grids improve automobile flow and circulation throughout redeveloped greyfields (**Figure 9-33**, **Figure 9-34**). New controlled intersections along Carling Avenue, Richmond Road, and the Sir John A. Macdonald Parkway help reduce automobile speeds and ensure that the road network can be safely shared and crossed by active transit users.

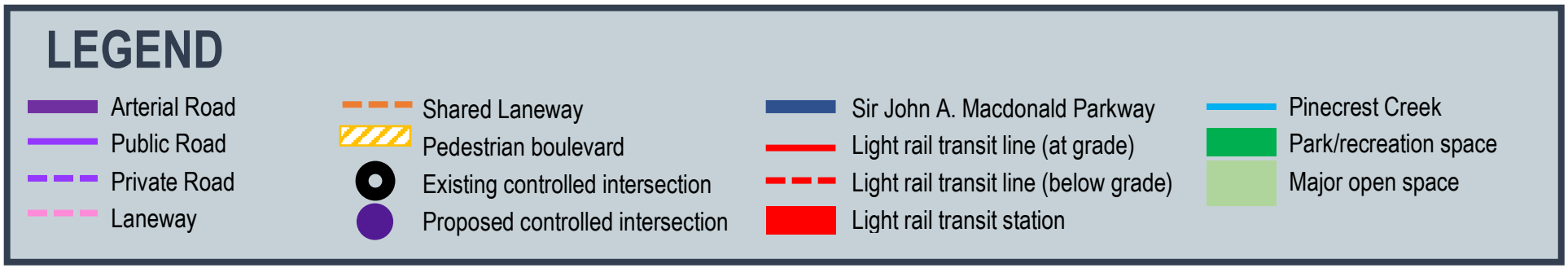
Figure 9-31: *Large cloverleafs currently entering the parkway from Carling Avenue should be replaced (Google Earth, 2019)*

The primary difference between Concept 1 and 2 is access to the Sir John A. Macdonald Parkway. Concept 1 maintains the access point on Carling Avenue but proposes a signalized T-intersection to replace the present cloverleaf, which is unecessary and consumes potential greenspace (**Figure 9-31**). The T-intersection creates a controlled entrance to the Parkway, helping reduce speeds and preserve the Parkway as a scenic leisure route.

Concept 2 also proposes a T-intersection providing access to the Parkway, but access is relocated to Richmond Road. This allows for reclamation of greenspace and reduced barriers between the station and areas of intensification. The pedestrian boulevard in Concept 2 is also designed to calm traffic and reduce speed in the central LFSA.

Both concepts celebrate the Parkway as a unique corridor facilitating leisurely, scenic vehicle access to central Ottawa from the LFSA. To further enhance and emphasize this gateway to the Parkway, regrading at access points can provide drivers with a vista over the Parkway Corridor upon entering the roadway. Additionally, special signage or public art can announce this entrance to the unique corridor. These features are used on many significant leisure parkways (**Figure 9-32**). As an important entrance to the South Shore and Sir John A. Macdonald Parkway, the LFSA should convey the significance of this uniquely scenic route for all Canadians.

Figure 9-32: *Unique signage indicating the start of the Bow Valley Parkway in Banff (Boothman, 2017)*



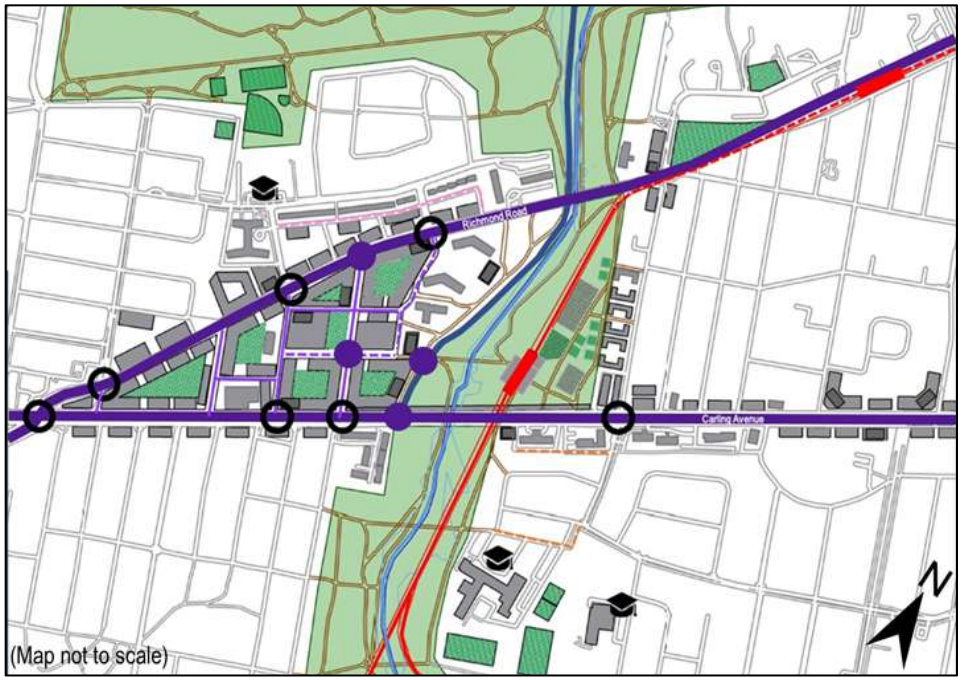


Figure 9-33: *Concept 1 vehicle circulation plan*

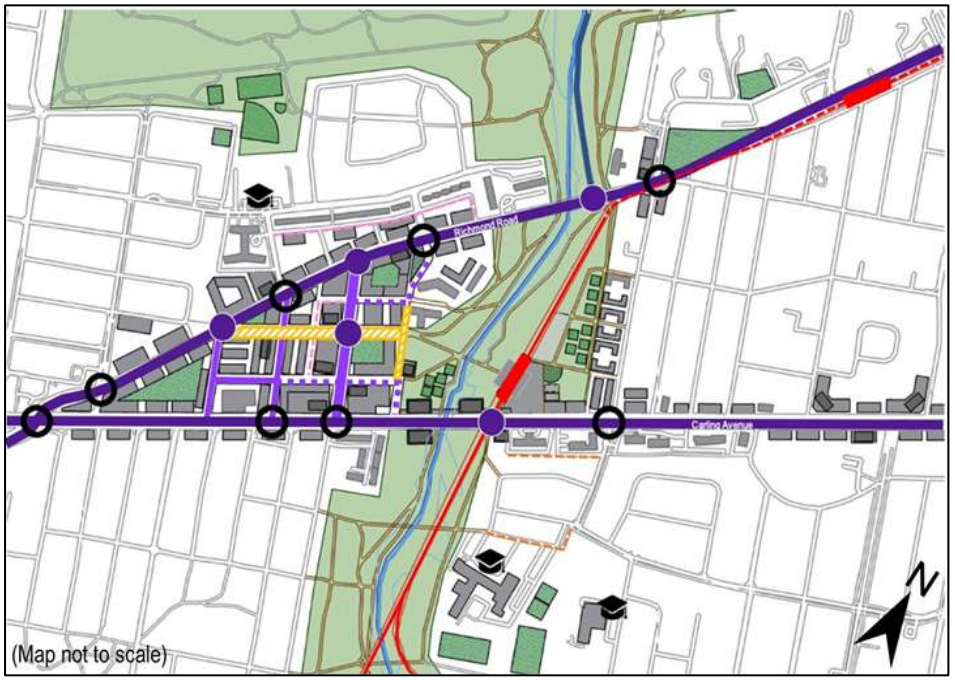


Figure 9-34: *Concept 2 vehicle circulation plan*

9.10 PUBLIC REALM

To create a vibrant, livable community at Lincoln Fields, the LFSA Plan devotes significant attention to the public realm (**Figure 9-36**, **Figure 9-37**). Elements of the public realm that are central to redevelopment include the Parkway Corridor, public and private greenspace, and the complete street network.

The Parkway Corridor defines the LFSA public realm. Pinecrest Creek is renaturalized, providing green infrastructure and enhancing natural amentities of the LFSA. The creek is lined with an extensive MUP network connecting to the Ottawa River South Shore. Following NCC policy and plans, the corridor will become an extension and remarkable gateway to the Ottawa riverfront. The current corridor is composed of passive greenspace, and both redevelopment concepts propose active elements surrounding the Lincoln Fields Station. These include multipurpose recreational courts, expanded community gardens, playgrounds, splash pads, and senior space. The Parkway Corridor will become a natural amenity with active and passive greenspace.

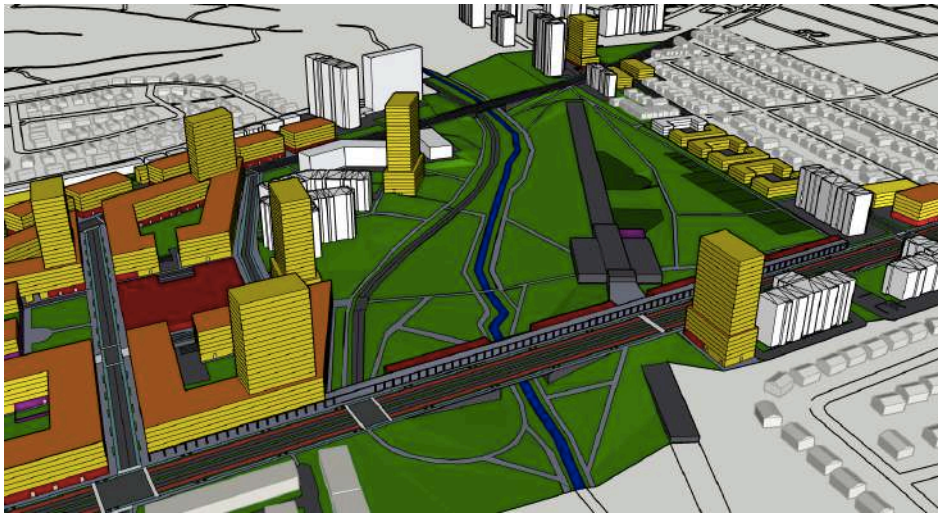


Figure 9-35: *Active recreation space in Kingston, Ontario (Rosenberg, 2017)*

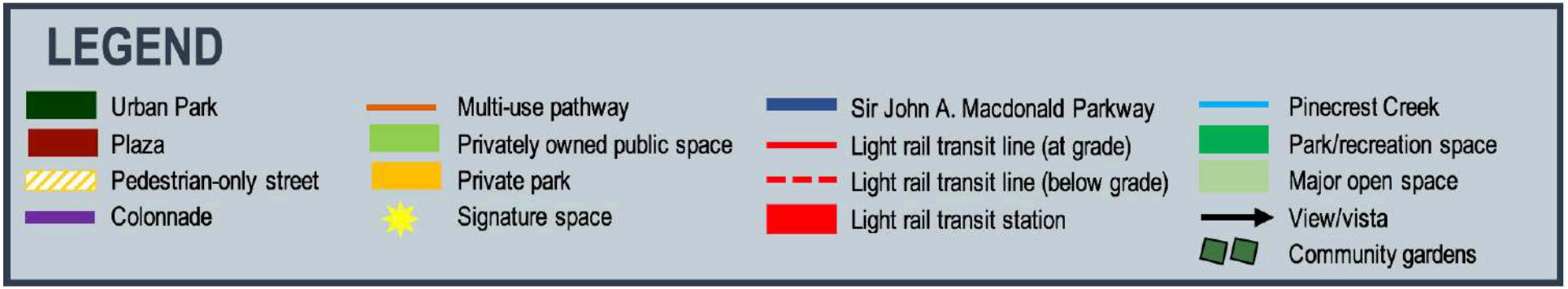
Complete streets throughout the LFSA will enhance the public realm. Carling Avenue, Richmond Road, and proposed streets will support street-oriented public and commercial activities. The proposed pedestrian colonnade will create impressive views along the Parkway Corridor (**Figure 9-35**). Public realm enhancements will improve the livability and experience of Lincoln Fields.

9.10.1 Concept 1: Public Realm

Through reducing the Sir John A. Macdonald Parkway and removing the bus loop at Lincoln Fields, Concept 1 creates an additional 6.6 hectares of greenspace. The Concept 1 public realm also improves the area through public and private greenspace in areas of intensification and redevelopment. The defining new greenspace is a public park and plaza adjoining the community centre and Metro. This space will include seating areas, space for sports and games, and patios for outdoor activities at the community centre. Other notable greenspaces are created by the perimeter blocks that span the LFSA. These will provide amenity space and outdoor recreation opportunities to residents (**Figure 9-36**).

9.10.2 Concept 2: Public Realm

Concept 2 creates 7.5 hectares of greenspace through removing the Sir John A. Macdonald Parkway and prioritizes remarkable urban greenspace. The park located adjacent to the community centre and the plaza at Lincoln Fields Station will provide large open spaces with flexibility according to community desires. Potential amenities include a splash pad, play equipment, art installations, seating areas, and open-air theatres. The pedestrian colonnade will be a key feature of the public realm with patios, art, seating, and greenery. The eastern edge of the colonnade will provide a view of the reclaimed greenspace and landscape. Removing the Parkway creates a more comprehensive MUP network leading to programmed space. Concept 2 proposes expanded community gardens and retains the crabapple groves that currently define the corridor (**Figure 9-37**).



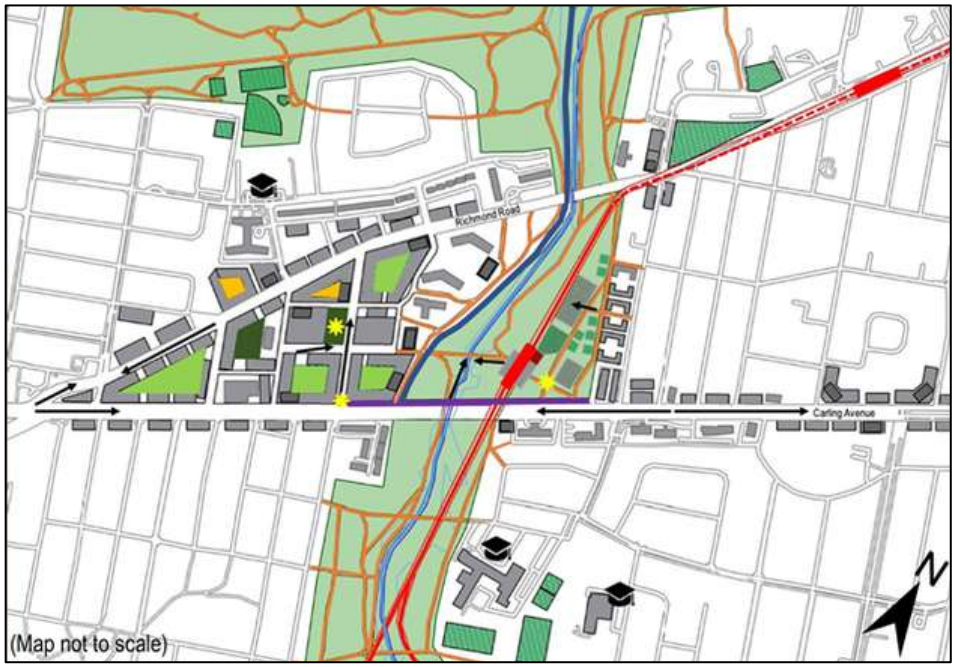


Figure 9-36: *Concept 1 public realm plan*

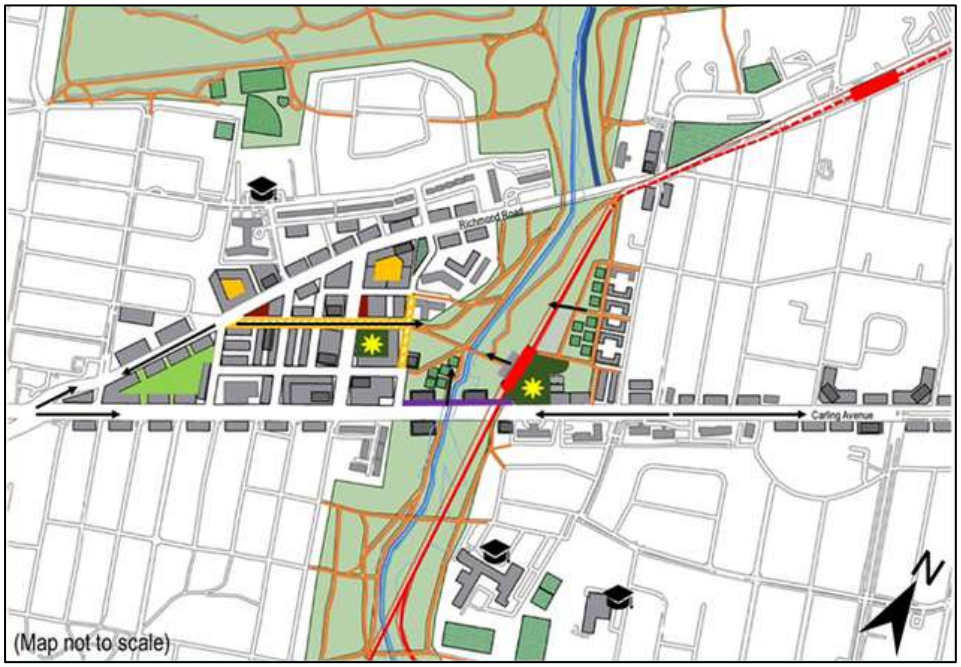


Figure 9-37: *Concept 2 public realm plan*

9.11 CONCLUSION

Concept 1 and 2 both align with project vision and analysis. However, Concept 2 transcends three important development constraints: the Sir John A. Macdonald Parkway, the location of Metro and Rexall, and development restriction on NILM. The benefits of this flexibilty are reflected in **Chapter 10: Evaluation**. Though both concepts offer a remarkable, transit-oriented vision for Lincoln Fields, Concept 2 more closely aligns with best practice and planning principles.

CHAPTER 10: EVALUATION

This chapter evaluates the design concepts according to criteria drawn from site, market, policy, and precedent analysis. The charrette and stakeholder interviews also influenced the criteria. The criteria are grouped according to Ottawa's 5 Big Moves.

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Compared to Concept 1, Concept 2 illustrates the numerous benefits of removing the Sir John A. Macdonald Parkway between Richmond Road and Carling Avenue. Concept 2 also allows for flexibility in the location of Metro and Rexall while relaxing the constraint of development prohibition on NILM.

The two design concepts are evaluated against each other, existing conditions, and stakeholder interests (**Table 10-1**). This process shows that Concept 2 better fulfills the criteria, therefore better reflecting City of Ottawa vision, stakeholder interests, and best practice principles of TOD planning.

10.1 COMPARATIVE ANALYSIS

10.1.1 Growth Management

- Concept 2 concentrates more density and height near the station through development on NILM, making the design more transit-oriented than transit-adjacent
- Concept 2 features increased intensification along the pedestrian colonnade, facilitating higher densities near the future LRT station
- Concept 2 includes a micro-neighbourhood of stacked townhomes within the Shopping Centre redevelopment site after relocating anchor tenants, providing more diverse “missing middle” housing options

10.1.2 Mobility

- Removing the Parkway allows for MUPs to follow both sides of the daylighted Pinecrest Creek between Carling Avenue and Richmond Road
- With the Parkway removed, Concept 2 proposes a pedestrian boulevard providing seamless, direct connection from the station through redeveloped areas, meaning active users do not conflict with cars
- Due to the simplified intersection at Richmond Road where the Parkway begins, the MUPs of Concept 2 provide better connection to the network north of Richmond Road and approaching the Ottawa River
- Through increased density around the LRT station, Concept 2 features wider ROWs better suited to active and public transit within the Lincoln Fields Shopping Centre redevelopment site

Table 10-1: *Evaluation of LFSA existing conditions, Concept 1, and Concept 2*

Principle	Evaluation Criteria	Existing	Concept 1	Concept 2
Growth Management	affordable housing	◔	●	●
	mix of uses to support daily activities	◑	◕	◕
	sustainable intensification	○	●	●
	transit-supportive densities	○	◕	●
Mobility	active transportation infrastructure	◑	◕	●
	multi-modal connections	◔	◕	●
	pedestrian-priority street design	◔	◕	●
	reduced and obscured vehicle parking	○	●	●
	seamless integration of transit modes	◔	◕	◕
Built Form	animation of public space	○	◕	●
	activation of street frontage	○	●	●
	creation of landmarks	○	◕	●
	consistent street frontage	○	●	●
	human-scale design	○	◕	◕
	mid-block connections	◔	◕	●
	mix of building types	◑	◕	●
Resiliency	daylight Pinecrest Creek	○	◕	●
	green infrastructure	◔	◕	◕
	minimized ecological footprint	◔	◑	◕
	naturalization of the Parkway	◔	◑	●
	social and local community services	◑	●	●
Economic Development	appropriate office and retail space	◑	◕	◕
	commercial use in public space	○	●	●
	compact, efficient development	○	◕	●
	complete streets encouraging pedestrian retail	○	◕	●
	destination placemaking	○	◑	◕

○ Not Addressed ◔ Unsatisfied ◑ Moderately Satisfied ◕ Satisfied ● Very Satisfied

10.1.3 Mobility

- Removing the Parkway allows for MUPs to follow both sides of the daylighted Pinecrest Creek between Carling Avenue and Richmond Road
- With the Parkway removed, Concept 2 proposes a pedestrian boulevard providing seamless, direct connection from the station through redeveloped areas, meaning active users do not conflict with cars
- Due to the simplified intersection at Richmond Road where the Parkway begins, the MUPs of Concept 2 provide better connection to the network north of Richmond Road and approaching the Ottawa River
- Through increased density around the LRT station, Concept 2 features wider ROWs better suited to active and public transit within the Lincoln Fields Shopping Centre redevelopment site

10.1.4 Built Form

- Concept 2 features a larger public plaza facing the LRT station due to the additional greenspace afforded by removing the Parkway entirely
- The stacked townhomes of Concept 2 provide a more gradual transition between the Shopping Centre site and surrounding neighbourhoods, which also feature townhomes and rowhouses
- Both Concept 1 and 2 feature activated street frontages. Concept 1 achieves this through perimeter blocks corresponding to the size of Metro, which becomes its own block within the Shopping Centre site
- Concept 2 features fewer perimeter block buildings due to less density on the Shopping Centre site given redevelopment on NILM. This fosters a finer-grained street network and more mid-block connections

10.1.5 Resiliency

- Removing the parkway in Concept 2 creates more continuous greenspace surrounding the daylighted Pinecrest Creek and LRT station
- Due to the removal of the Parkway, Concept 2 more prominently features Pinecrest Creek. Removing the Parkway allows for the banks of Pinecrest Creek to better function for natural space and flood attenuation
- Concept 1 plans for bioswales and green roofs in redeveloped areas, but vegetation nearer to the floodplain is more ecologically impactful

10.1.6 Economic Development

- Concept 2 includes more attractive development for office space. The buildings proposed on NILM allow direct access into the LRT station via elevators, which is convenient and efficient for office commuters
- Both concepts feature urban parks near mixed-use development. Concept 2 also includes pedestrian-oriented retail at ground level along the public pedestrian boulevard
- The pedestrian boulevard, finer-grained street network, and wider ROWs facilitate more pedestrian traffic to retail in Concept 2
- Concept 2 allows the naturalized recreational greenspace around Pinecrest Creek to continue toward new development in the Shopping Centre site. This contributes to better placemaking than Concept 1, where integration of redevelopment sites and the renaturalized Parkway is inhibited through retention of the Parkway vehicle lanes

10.2 STAKEHOLDER ANALYSIS

This section evaluates the design concepts according to the invested stakeholders identified in Chapter 3. Despite requiring more ambitious redevelopment, Concept 2 better reflects these interests than Concept 1.

10.2.1 The City of Ottawa

Both concepts meet City of goals for intensification and identify areas for affordable housing. Both concepts offer mixed-use, well-connected development around the future Lincoln Fields station that supports the City target of 50% of all trips being undertaken via sustainable modes by 2031.

Concept 2 allows for more sophisticated urban design due to the pedestrian boulevard and high-rise clusters around the LRT station. Concept 2 is also more resilient due to the Parkway removal and activated, naturalized greenspace.

10.2.2 Ottawa City Councillors

Both design concepts offer improved quality of life for residents compared to existing conditions. The proposed redevelopment will integrate a new complete street network, add community amenities, and improve the coherence and vibrancy of street edges throughout the community.

Concept 2 offers superior livability due to the larger continuous greenspace featuring active transportation and recreational opportunities. Such a natural urban greenspace adjoining the state-of-the-art station and intensified urban development is more likely to garner attention as a new and improved space.

10.2.3 The National Capital Commission

Both design concepts provide more residential and commercial development, translating to more people enjoying the improved NCC greenspace.

The more activated, naturalized, and continuous greenspace proposed in Concept 2 allows this area to serve as a true gateway to the Ottawa River South Shore. This greenspace will serve residents of the LFSA and throughout the Capital Region.

10.2.4 OC Transpo

Both design concepts provide better bus access to Lincoln Fields LRT Station along Carling Avenue through dedicated transit-priority bus lanes. Proposed street networks allow for buses to complete an on-street bus loop rather than in the existing and proposed dedicated loop. This route through the redeveloped street network allows bus passengers to immediately access Metro and the community centre. People with accessibility concerns can take the bus from the LRT station into the redeveloped Shopping Centre site without walking.

Concept 2 further capitalizes on new transit infrastructure in the LFSA through proposing a generous public plaza adjacent to Lincoln Fields Station, offering more direct access and egress via MUPs, and encouraging higher-density development connected directly to the station on NILM.

10.2.5 RioCan

Tower clusters directly adjacent to the LRT station in Concept 2 connect the station surroundings to the mall redevelopment site, creating a more coherent community. This will make the area more attractive and easier for RioCan to fulfill lease requirements. Concept 2 also increases the visibility of Metro by relocating the store to frontage along Carling Avenue.

10.2.6 Other Commercial Landowners

Concept 2 allows for a diversity of commercial tenancy options. Some are along the pedestrian boulevard, and others are along the internal streets and arterials.

10.2.7 Local Community Associations

Both design concepts feature sizeable community centres, affordable housing locations, and attention to the public realm through urban parks.

The pedestrian boulevard of Concept 2 can be conceptualized as a large public space that could integrated with local commercial and public activities.

10.2.8 General Public

The removal of the Parkway and activated greenspace of Concept 2 provides a more compelling destination for residents of Ottawa and the Capital Region. Cyclists and pedestrians will extend their route from the South Shore riverfront to the Lincoln Fields community.

10.2.9 Transit Users

Both plans benefit transit users who are arriving at Lincoln Fields by introducing amenities through redevelopment and by improving street completeness and connectivity, allowing visitors to safely navigate the community.

Concept 2 offers a superior experience due to the MUPs that lead directly from the LRT station into a pedestrian boulevard within the community, all without crossing the Parkway or otherwise conflicting with automobiles.

10.2.10 Office Tenants

Concept 2 offers more attractive office leasing opportunities due to proposing buildings with direct elevator access to Lincoln Fields Station.

10.2.11 Retail Tenants

Through increased connectivity, Concept 2 allows retail tenants to benefit from increased intensity of visitors. Transit riders, pedestrians, and cyclists will enjoy dedicated infrastructure providing access to street-oriented local retail.

10.3 CONCLUSION

Table 10-2 summarizes the key variables that distinguish Concept 2 from Concept 1 and explains why these variables mean Concept 2 is preferred, despite both design options aligning with the project analysis, vision, and guiding principles.

Table 10-2: *Summary of variables that distinguish Concept 2 from Concept 1, and the corresponding benefits of Concept 2*

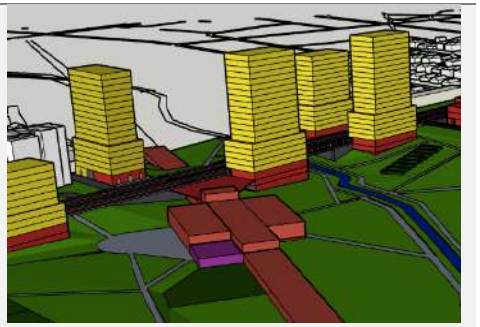
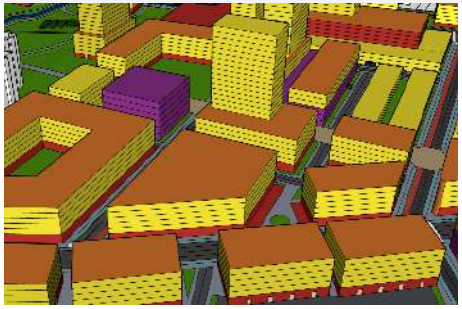
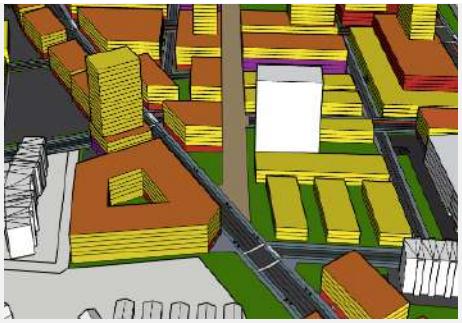
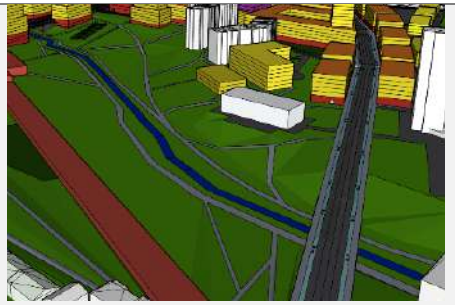
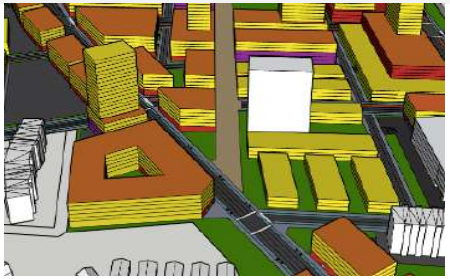
DESIGN VARIABLE	CORRESPONDING BENEFIT OF CONCEPT 2	ILLUSTRATION
DEVELOPMENT DIRECTLY AROUND THE LRT STATION	• More in line with TOD principles • Efficient possible location for office buildings • Creates a landmark by allowing height and density around the station	
FINE-GRAINED INTERNAL STREET NETWORK	• More route options and improved safety for pedestrians navigating the area • More street frontage for commercial tenants	
DIVERSITY OF BUILDING TYPES	• Future residents have a choice between ground-oriented townhomes, high-rise towers, or medium-rise podiums • Expands the neighbourhood affordability spectrum with “missing middle” housing options	

Table 10-3: *Continued summary of variables that distinguish Concept 2 from Concept 1, and the corresponding benefits of Concept 2*

DESIGN VARIABLE	CORRESPONDING BENEFIT OF CONCEPT 2	ILLUSTRATION
MULTI-USE PATHWAYS FOLLOW PINECREST CREEK AND CONNECT TO THE SOUTH SHORE NETWORK	• Improved visual experience for active transportation users • Improved multimodal access to the station • Facilitates active transportation goals of the city and region • Brings pedestrians and cyclists into the Lincoln Fields community	
PEDESTRIAN BOULEVARD	• Access to the station without car interaction • Facilitates destination place-making through connection to greenspace • Functions as a large public space • Increases foot traffic for local retailers	
LARGER CONTINUOUS NATURALIZED GREENSPACE	• Creates a memorable urban greenspace next to the station and new development • Provides flood attenuation benefits and climate change resiliency through vegetation • Activates space for gardening and recreation	

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CHAPTER 11: RECOMMENDATIONS

As with the vision and guiding principles, the recommendations of the LFSA Plan are adapted from the City of Ottawa's 5 Big Moves. These recommendations are also informed through analysis and expressed in Concept 1 and Concept 2.

The recommendations for the LFSA Plan are founded on the City of Ottawa's 5 Big Moves: growth, mobility, built form, resiliency, and economic development.

11.1 GROWTH

- Achieve growth through intensification and redevelopment on existing greyfields. Implement appropriate TOD zoning around the station and along important arterials in alignment with other City of Ottawa TOD plans (**Table 11-1**, **Appendix D**). In accordance with other City of Ottawa TOD plans, properties within the LFSA should be rezoned TD (Transit-oriented Development). TD zones permit a wide range of transit-supportive densities
- Detached housing along the Parkway Corridor and arterial roads should gradually redevelop into multi-unit residential buildings
- Reduce at-grade parking given proximity to higher-order transit and in conformance with City policy, as parking is not required for near-transit areas (**Figure 11-1**). Parking on the current Lincoln Fields Shopping Centre should be underground but not under roads or greenspace
- Develop an Affordable Housing Strategy for the LFSA that will include identification of City-owned properties targeted for future affordable housing development and establishment of targets for private landowners including RioCan
- Adopt appropriate phasing for the optimal, efficient redevelopment of Lincoln Fields (**Table 11-2**)

Table 11-1: *Transit-oriented development zoning requirements (City of Ottawa, 2008)*

ZONE	TD1	TD2	TD3
MIN. DENSITY	150 units/ha	250 units/ha	350 units/ha
MAX. HEIGHT	20 m	60 m	90 m
MIN. FSI	0.5	1.0	1.5

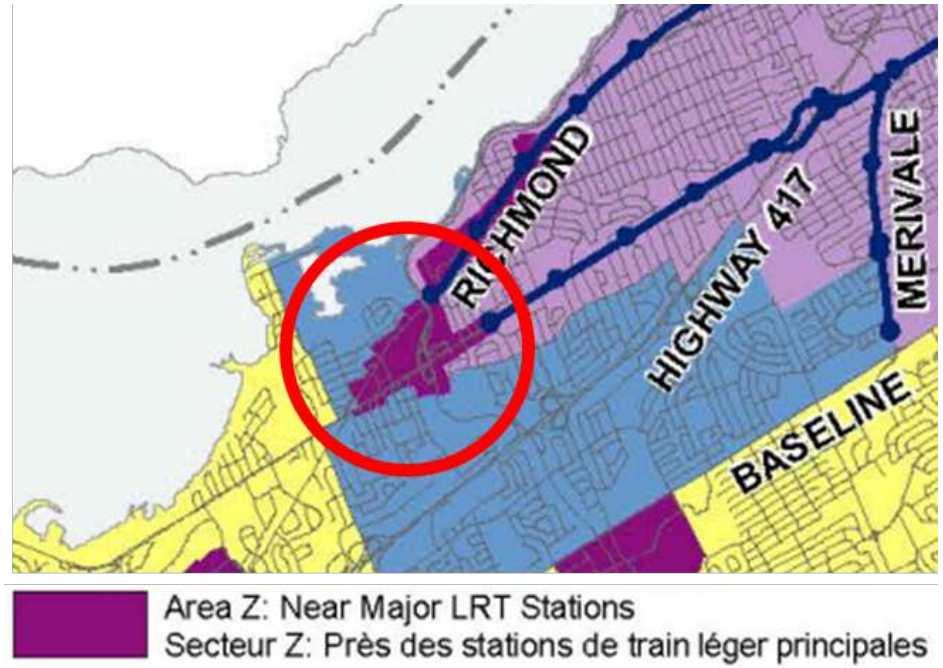

Figure 11-1: *Parking schedule map within the City of Ottawa Zoning By-law 2008-250 (City of Ottawa, 2008)*

Table 11-2:*Phasing plan for the LFSA*

	CITY OF OTTAWA	NCC	RIOCAN	OC TRANSPO
SHORT-TERM (PRE-LRT)	• Complete the Secondary Plan for Lincoln Fields, drawing on the principles and recommendations of this LFSA Plan • Convert the wide ROWs on Carling Avenue and Richmond Road into complete streets • Identify and complete opportunities for affordable housing • Work with RioCan to plan a new street grid for the Shopping Centre site • Work with the NCC to daylight Pinecrest Creek	• Amend vision for the Sir John A. Macdonald Parkway Corridor to accommodate renaturalization of Pinecrest Creek and reduction of Parkway vehicle lanes • Terminate the Parkway at a T-intersection, removing the existing cloverleafs • Coordinate to widen Carling Avenue and create a covered pedestrian colonnade leading to Lincoln Fields Station • Implement the South Shore Plan and create more active greenspace in the Parkway Corridor in consultation with the City and community	• Demolish the Lincoln Fields Shopping Centre • Collaborate to relocate Metro and Rexall along Carling Avenue • Identify and implement an attractive redevelopment product to excite market interest • Redevelop portions of the Shopping Centre site adjoining arterial roads and the Parkway Corridor near public transit	• Update local area transit plans to consider future bus connections and proposed improvements for the station connection on Carling Avenue
MID-TERM (LRT)	• Consider and invest in facilities at the proposed community centre • Ensure redevelopment proceeds in accordance with established policy and vision for the LFSA	• Reduce or remove the Sir John A. Macdonald Parkway from Richmond Road to Carling Avenue • Ensure MUP networks within the Parkway Corridor connect to redevelopment areas and the LRT station • Collaborate to redevelop appropriate portions of NILM near the station	• Intensify redevelopment throughout the Shopping Centre site	• Complete the Lincoln Fields LRT Station • Remove and replace the proposed bus loop through redeveloped street connections
LONG-TERM (POST-LRT)	• Continue to monitor redevelopment in the LFSA	• Monitor connectivity and user experience in the Parkway Corridor	• Identify and complete locations for street-oriented infill	• Monitor transit use and connectivity at Lincoln Fields

11.2 MOBILITY

- The cloverleaf entrance ramps of the Sir John A. Macdonald Parkway should be replaced with a T-intersection at Richmond Road or Carling Avenue, removing a barrier to station access in the Parkway Corridor
- Construct a MUP network providing direct access from areas of intensification to the station, including a pedestrian boulevard linking directly to the future station. This goal is contingent on agreement from property owners including the NCC, Osgoode Properties, and RioCan
- Remove the bus loop at Lincoln Fields Station and replace through new street connections in redeveloped greyfields
- Create complete streets that include cycle tracks and widened sidewalks along Richmond Road, Carling Avenue, and other important networks within redeveloped greyfield sites, supporting multimodal transportation. Dedicate two transit-priority lanes on Carling Avenue

11.3 BUILT FORM

- Create a covered pedestrian colonnade connecting redevelopment on the Shopping Centre site to the future LRT station
- Consider a landmark building at the Richmond Road and Carling Avenue intersection to provide a gateway for the new Lincoln Fields community
- Renegotiate the proposed site plan from RioCan to create flexibility in the location of Metro and Rexall, allowing for better phasing of development and establishing ideal conditions for the development of future streets and public spaces
- Strive for small, permeable blocks with midblock connections on redeveloped greyfield sites
- Promote diversity of housing form in redeveloped areas, including stacked townhomes to address “missing middle” housing
- Locate taller buildings and higher densities in areas with best connection to the Lincoln Fields Station and limited shadowing impact. Provide transition in form to the surrounding low-rise residential neighbourhoods
- Feature residential point towers with a minimum three-metre step-back above mixed-use podiums to increase density while maintaining human-scale development at street level
- Activate public plazas through art, furniture, and recreational features to ensure a vibrant and safe public realm

11.4 RESILIENCY

- Renaturalize Pinecrest Creek to improve natural habitat, connectivity, green infrastructure, and natural amenities
- Reduce or remove the Sir John A. Macdonald Parkway to create up to 7.5 additional hectares for green infrastructure, recreation, and active transit
- Negotiate with RioCan to create new community facilities and amenities on the Lincoln Fields Shopping Centre site
- Consider energy-efficient building features and materials that reduce ecological footprint and long-term maintenance cost

11.5 ECONOMIC DEVELOPMENT

- Provide commercial and retail opportunities at the LRT station
- Locate street-oriented commercial and retail along significant complete streets to provide neighbourhood amenities and help tenants benefit from increased traffic
- Consider opportunities for federal office space on NILM adjoining the Lincoln Fields Station
- Enhance community design, connectivity, and natural features of the LFSA to improve visitability of the area

11.6 CONCLUSION

Drawn from analysis and the proposed design concepts, these recommendations will help achieve optimal redevelopment of Lincoln Fields in accordance with the project vision and best practice principles. Lincoln Fields will become a livable, transit-supportive community with remarkable urban design and greenspace.

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CHAPTER 12: CONCLUSION

This chapter summarizes and presents ten critical recommendations for the LFSA Plan. Commentary on presentation of the plan in Ottawa (**Appendix J**) is also discussed. The LFSA Plan promotes a livable, transit-oriented vision for the Lincoln Fields community.

12.1 PROJECT SUMMARY

Through extensive analysis, the project team identified that the Lincoln Fields community lacks placemaking, transit-supportive development, and multimodal connectivity. However, the area also demonstrates significant potential due to unique central greenspace, incoming transit investment, and greyfield redevelopment opportunities. To create a new vision for Lincoln Fields, the project team examined precedent case studies for TOD, mobility hubs, greyfield redevelopment, and creek renaturalization. Best practices from these precedents were combined with the results of a design charrette, site analysis, market analysis, and policy analysis to develop a vision statement and evaluation criteria system based on good planning principles and tailored to the local context.

This vision inspired two distinct design concepts premised on different approaches to three primary constraints. Evaluation of these concepts demonstrates a significant improvement over the existing conditions of Lincoln Fields. However, due to removing the Sir John A. Macdonald Parkway, relocating Metro and Rexall, and proposing appropriate development on NILM, Concept 2 achieves better planning outcomes. Concept 2 results in an improved pedestrian experience, enhanced ecological sustainability, better greenspace, and stronger adherence to TOD best practices.

The project team recommends that stakeholders including the NCC, City of Ottawa, and RioCan work together to achieve the vision of Concept 2 for the Lincoln Fields Secondary Plan. This will create an optimal and mutually beneficial solution for all stakeholders, including current and future residents of both Lincoln Fields and Ottawa.

12.2 PRESENTATION

After analyzing and creating a planning vision for the LFSA, the project team presented the LFSA Plan on December 10, 2019, at Ottawa City Hall (**Figure 12-1**). Over 40 stakeholders and professionals were in attendance, including Ward Councillor Theresa Kavanagh and staff from the City of Ottawa and NCC.

The team addressed questions and received valuable feedback from attendees (**Appendix J**). At the request of Councillor Kavanagh, material from this presentation was adapted for a public open house on December 11, 2019, attended by a member of the project team. These presentations provided the team with valuable insight and helped consolidate the final vision for Lincoln Fields.

Figure 12-1: *On December 10, 2019, the project team presented the LFSA Plan to stakeholders and attendees at Ottawa City Hall (SURP, 2019)*

12.3. RECOMMENDATIONS

The project team produced numerous recommendations to achieve the Concept 2 vision, but the most important are as follows:

1. Remove the Sir John A. Macdonald Parkway between Richmond Road and Carling Avenue and renaturalize Pinecrest Creek
2. Revise the site plan for anchor tenants Metro and Rexall to allow flexibility in location
3. Establish direct MUP connections across the Lincoln Fields Shopping Centre site to the future transit station
4. Negotiate with RioCan to provide new community facilities as part of redevelopment on the Shopping Centre site
5. Create complete streets with cycle tracks, sidewalks, and reduced vehicle lanes on the large Carling Avenue and Richmond Road ROWs
6. Construct a pedestrian colonnade along Carling Avenue from the Shopping Centre site to the future LRT station
7. Remove and replace the proposed bus loop at Lincoln Fields Station through redeveloped street connections
8. Develop an Affordable Housing Strategy to identify City-owned properties for affordable housing and set targets for private landowners
9. Consider appropriate development on NILM closer to the Lincoln Fields LRT Station
10. Encourage a landmark flatiron building at the Carling Avenue and Richmond Road intersection

Ultimately, the City of Ottawa should consult with the NCC, RioCan, and other key stakeholders to effectively manage the constraints that pose challenges to redevelopment.

These recommendations, if successfully implemented, will assist in the creation of a vibrant transit-oriented community design that embodies contemporary planning principles through the creation of a superior public realm and the provision of diverse housing options for residents of the area. The proposed design will spark dense and vibrant growth within the area and will support Ottawa in its goal of becoming the most livable mid-size city in North America.

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